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ORIGINAL

BEFORE THE ARIZONA CORPORATION

COMMISSIONERS

DOUG LITTLE – Chairman
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

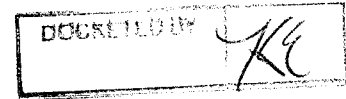
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Arizona Corporation Commission

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MAY 23 2016



IN THE MATTER OF THE APPLICATION OF
LIBERTY UTILITIES (BELLA VISTA WATER)
CORP., AN ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE OF
ITS UTILITY PLANTS AND PROPERTY AND
INCREASES IN ITS WATER AND
WASTEWATER RATES AND CHARGES FOR
UTILITY SERVICE BASED THEREON.

DOCKET NO. W -02465A-15-0367

IN THE MATTER OF THE APPLICATION OF
LIBERTY UTILITIES (RIO RICO WATER &
SEWER) CORP., AN ARIZONA
CORPORATION, FOR A DETERMINATION OF
THE FAIR VALUE OF ITS UTILITY PLANTS
AND PROPERTY AND INCREASES IN ITS
WATER AND WASTEWATER RATES AND
CHARGES FOR UTILITY SERVICE BASED
THEREON.

DOCKET NO. WS-02676A-15-0368

IN THE MATTER OF THE APPLICATION OF
LIBERTY UTILITIES (BELLA VISTA WATER)
CORP., AN ARIZONA CORPORATION, FOR
AUTHORITY TO ISSUE EVIDENCE OF
INDEBTEDNESS IN THE AMOUNT NOT TO
EXCEED \$4,700,000.

DOCKET NO. W -02465A-15-0370


IN THE MATTER OF THE APPLICATION OF
LIBERTY UTILITIES (RIO RICO WATER AND
SEWER) CORP., AN ARIZONA
CORPORATION, FOR AUTHORITY TO ISSUE
EVIDENCE OF INDEBTEDNESS IN THE
AMOUNT NOT TO EXCEED \$8,900,000.

DOCKET NO. WS-02676A-15-0371

NOTICE OF FILING
STAFF'S DIRECT TESTIMONY

1 The Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission")
2 hereby submits the Direct Testimony and Exhibits of Staff witnesses Teresa Hunsaker, Crystal
3 Brown, James Armstrong, Michael Thompson, and Jian Liu, regarding the above-captioned dockets.

4 RESPECTFULLY SUBMITTED this 23rd day of May, 2016.

5
6 

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8 Bridget Humphrey
9 Attorneys, Legal Division
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11 **ORIGINAL** and thirteen (13) copies of the
12 foregoing were filed this of 23rd day of May,
13 2016, with:

13 Docket Control
14 Arizona Corporation Commission
15 1200 West Washington Street
16 Phoenix, Arizona 85007

16 **COPIES** of the foregoing were mailed and/or
17 emailed this 23rd day of May, 2016, to:

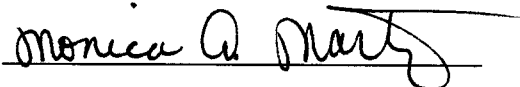
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27 
28

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER)
CORP., AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF)
ITS UTILITY PLANTS AND PROPERTY AND)
FOR INCREASES IN ITS WATER RATES AND)
CHARGES FOR UTILITY SERVICE BASED)
THEREON.)
_____)

DOCKET NO. W-02465A-15-0367

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER)
CORP., AN ARIZONA CORPORATION, FOR)
AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$4,700,000.)
_____)

DOCKET NO. W-02465A-15-0370

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR A DETERMINATION OF THE FAIR)
VALUE OF ITS UTILITY PLANTS AND)
PROPERTY FOR INCREASES IN ITS WATER)
CHARGES FOR UTILITY SERVICE BASED)
RATES AND THEREON.)
_____)

DOCKET NO. WS-02676A-15-0368

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$8,900,000.)
_____)

DOCKET NO. WS-02676A -15-0371

DIRECT
TESTIMONY
OF
TERESA B. HUNSAKER
PUBLIC UTILITIES ANALYST
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

MAY 23, 2016

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ATTACHMENTS

APUC Cost Allocation Manual effective January 1, 2014 page 21 of 26.....	Attachment 1
APUC Cost Allocation Manual effective July 1, 2015	Attachment 2

EXECUTIVE SUMMARY
LIBERTY UTILITIES (BELLA VISTA WATER) CORP. AND
LIBERTY UTILITIES (RIO RICO WATER & SEWER) CORP.
DOCKET NOS. W-02465A-15-0367, WS-02676A-15-0368,
W-02465A-15-0370 AND WS-02676A-15-0371

On October 28, 2015, Liberty Utilities (Bella Vista Water) Corp. ("Bella Vista" or "Company"), filed an application for a permanent rate increase in Docket No. W-02465A-15-0367 ("Rate Docket"). On November 2, 2015, Bella Vista filed an application in Docket No. W-02465A-15-0370 requesting authority from the Commission to issue evidence of indebtedness in a total amount not to exceed \$4,700,000 ("Financing Docket").

October 28, 2015, Liberty Utilities (Rio Rico Water & Sewer) Corp. ("Rio Rico" or "Company") filed an application for a permanent rate increase in Docket No. WS-02676A-15-0368 ("Rate Docket"). On November 2, 2015, Rio Rico filed an application in Docket No. WS-02676A-15-0371 requesting authority from the Commission to issue evidence of indebtedness in a total amount not to exceed \$8,900,000 ("Financing Docket").

On November 3, 2015, Bella Vista and Rio Rico ("Liberty BV/RR" or "Companies") filed motions to consolidate both Rate Dockets and both Finance Dockets.

Bella Vista Water Company

Bella Vista is a for-profit, Class B public service corporation serving approximately 8,133 residential customers, 1,035 commercial customers, and 189 fire protection customers in portions of Cochise County Arizona. Bella Vista is organized under the Liberty Utilities (South) segment of Algonquin Power & Utilities Corporation ("APUC"). The Company's current authorized rates and charges were determined in Decision No. 72251 dated April 7, 2011, using a test year ending March 31, 2009.

Bella Vista proposed a \$1,554,323, or 33.61 percent, revenue increase from \$4,624,730 to \$6,179,053. The proposed revenue increase would produce an operating income of \$1,209,727 for a 9.16 percent rate of return on its proposed adjusted original cost rate base ("OCRB") of \$13,205,189.

Staff recommends a \$607,597, or 13.14 percent, revenue increase from \$4,624,730 to \$5,232,327. Staff's recommended revenue increase would produce an operating income of \$889,329 for a 7.55 percent rate of return on a Staff's adjusted OCRB of \$11,779,194.

Rio Rico Water and Sewer Company – Water Division ("Rio Rico Water")

Rio Rico Water is a for-profit, Class B public service corporation serving approximately 6,404 water customers in portions of Santa Cruz County Arizona. Rio Rico Water is organized under the Liberty Utilities (South) segment of Algonquin Power & Utilities Corporation. The Company's current authorized rates and charges were determined in Decision No. 73996 dated July 30, 2013, using a test year ending February 29, 2012.

Rio Rico Water proposed a \$683,836, or 22.55 percent, revenue increase from \$3,032,792 to \$3,716,648. The proposed revenue increase would produce an operating income of \$762,189 for an 8.60 percent rate of return on its proposed adjusted OCRB of \$8,861,632.

Staff recommends a \$412,298, or 13.59 percent, revenue increase from \$3,032,792 to \$3,445,090. Staff's recommended revenue increase would produce an operating income of \$699,594 for a 7.55 percent rate of return on a Staff's adjusted OCRB of \$9,266,140.

Rio Rico Water and Sewer Company – Sewer Division ("Rio Rico Sewer")

Rio Rico Sewer is a for-profit, Class B public service corporation serving approximately 2,046 wastewater customers in portions of Santa Cruz County Arizona. Rio Rico Sewer is organized under the Liberty Utilities (South) segment of Algonquin Power & Utilities Corporation. The Company's current authorized rates and charges were determined in Decision No. 73996 dated July 30, 2013, using a test year ending February 29, 2012.

Rio Rico Sewer proposed a \$226,351, or 15.31 percent, revenue increase from \$1,478,323 to \$1,704,674. The proposed revenue increase would produce an operating income of \$460,616 for an 8.60 percent rate of return on its proposed adjusted OCRB of \$5,355,381.

Staff recommends a decrease of \$20,025, or a 1.35 percent, revenue decrease from \$1,478,323 to \$1,458,298. Staff's recommended revenue decrease would produce an operating income of \$370,334 for a 7.55 percent rate of return on a Staff's adjusted OCRB of \$4,905,082.

Adjustor Mechanisms:

Staff recommends approval of the Company's proposed Purchased Power Adjustor Mechanism ("PPAM") subject to certain conditions.

1 **INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Teresa B. Hunsaker. I am a Public Utilities Analyst III employed by the Arizona
4 Corporation Commission (“ACC” or “Commission”) in the Utilities Division (“Staff”). My
5 business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. In my capacity as a Public Utilities Analyst, I analyze and examine accounting, financial,
9 statistical and other information included in utility rate, financing and other applications. In
10 addition, I prepare written reports based on my analyses and present Staff’s recommendations
11 to the Commission on utility revenue requirements, rate design and other issues. I am also
12 responsible for testifying at formal hearings on these matters.

13
14 **Q. Please describe your educational background and professional experience.**

15 A. I received a Bachelor of Science Degree in Accounting from the University of Nevada, Las
16 Vegas and an Associate Degree in Business Management from Clark County Community
17 College. I have attended the National Association of Regulatory Utility Commissioners
18 (“NARUC”) Utilities Rate School, which presents general regulatory and business issues.
19 Additionally, I have attended a Financial Management seminar sponsored by the American
20 Water Works Association. I joined the Commission as a Public Utilities Analyst in October
21 of 2013. Prior to employment with the Commission, I worked in several different accounting
22 and auditing positions for more than 25 years.

23
24 **Q. What cases have been consolidated in this docket?**

25 A. On October 28, 2015 Liberty Utilities (Bella Vista Water) Corp. (“Bella Vista”, “BV” or
26 “Company”) filed an application for a permanent rate increase in Docket No. W-02465A-15-

1 0367 ("Rate Docket"). On November 2, 2015, Bella Vista filed an application in Docket No.
2 W-02465A-15-0370 requesting authority from the Commission to issue evidence of
3 indebtedness in a total amount not to exceed \$4,700,000 ("Financing Docket"). On October
4 28, 2015, Liberty Utilities (Rio Rico Water & Sewer) Corp. ("Rio Rico", "RR" or "Company")
5 filed an application for a permanent rate increase in Docket No. WS-02676A-15-0368 ("Rate
6 Docket"). On November 2, 2015, Rio Rico filed an application in Docket No. WS-02676A-
7 15-0371 requesting authority from the Commission to issue evidence of indebtedness in a
8 total amount not to exceed \$8,900,000 ("Financing Docket"). On November 3, 2015, Bella
9 Vista and Rio Rico ("Liberty BV/RR" or "Companies") filed motions to consolidate both
10 Rate Dockets and both Finance Dockets.

11
12 **Q. What is the scope of your testimony in these cases?**

13 A. I am presenting Staff's analysis and recommendations regarding Bella Vista's application for a
14 permanent increase in its rates and charges for water utility service within Cochise County,
15 Arizona. Also, I am presenting Staff's analysis and recommendations regarding Rio Rico's
16 application for a permanent increase in its rates and charges for water and sewer utility service
17 within Santa Cruz County, Arizona. In both cases, I am presenting testimony and schedules
18 addressing rate base, operating revenues and expenses, revenue requirement, and will later file
19 additional direct testimony regarding rate design. Staff witness Ms. Crystal Brown is
20 presenting Staff's cost of capital testimony and Staff's analysis and related recommendations
21 for the financing applications. Mr. James Armstrong is presenting Staff's analysis and related
22 recommendations on Fair Value Arizona Rate Evaluation Model ("FARE") rate making
23 mechanism. Mr. Michael Thompson is presenting Staff's engineering analysis and related
24 recommendations for Bella Vista. Mr. Jian Liu is presenting Staff's engineering analysis and
25 related recommendations for Rio Rico.

1 **Q. What is the basis of your testimony in this case?**

2 A. I performed a regulatory audit of both Bella Vista's and Rio Rico's ("Liberty BV/RR" or
3 "Companies") applications and records. The regulatory audit consisted of examining and
4 testing financial information, accounting records, and other supporting documentation and
5 verifying that the accounting principles applied were in accordance with the Commission-
6 adopted NARUC Uniform System of Accounts ("USOA") and Generally Accepted
7 Accounting Principles ("GAAP").
8

9 **BACKGROUNDS**

10 *Bella Vista*

11 **Q. Please review the background of the application for Bella Vista.**

12 A. Bella Vista is a for-profit, Class B public service corporation serving approximately 8,133
13 residential customers, 1,035 commercial customers, and 189 fire protection customers in
14 portions of Cochise County Arizona. Bella Vista is organized under the Liberty Utilities
15 (Sub) Corp ("LU Sub", "Liberty South" or "LU 8020") a segment of Algonquin Power &
16 Utilities Corporation ("APUC"). The Company's current authorized rates and charges were
17 determined in Decision No. 72251 dated April 7, 2011. The decision consolidated the
18 operations and transfer of the utility assets of Northern Sunrise Water Company ("Northern
19 Sunrise") and Southern Sunrise Water Company ("Southern Sunrise") to Bella Vista Water
20 Company.
21

22 *Rio Rico Water & Sewer Company – Water Division ("Rio Rico Water" Or "RRW")*

23 **Q. Please review the background of the application for Rio Rico Water.**

24 A. Rio Rico Water is a for-profit, Class B public service corporation serving approximately 6,404
25 water customers in portions of Santa Cruz County Arizona. Rio Rico Water is organized

1 under the Liberty South segment of APUC. The Company's current authorized rates and
2 charges were determined in Decision No. 73996 dated July 30, 2013.

3
4 *Rio Rico Water & Sewer Company – Sewer Division (“Rio Rico Sewer” or “RRS”)*

5 **Q. Please review the background of the application for Rio Rico Sewer.**

6 A. Rio Rico Sewer¹ is a for-profit, Class B public service corporation serving approximately
7 2,046 wastewater customers in portions of Santa Cruz County Arizona. Rio Rico Sewer is
8 organized under the Liberty South segment of APUC. The Company's current authorized
9 rates and charges were determined in Decision No. 73996 dated July 30, 2013.

10
11 *Algonquin Power & Utilities Corporation (“APUC”)*

12 **Q. Please provide some background on the corporate structure of APUC and information**
13 **about APUC.**

14 A. Liberty BV/RR is ultimately owned by APUC. APUC is a publicly traded member of the
15 Toronto Stock Exchange and is a registrant with the U.S. Security and Exchange
16 Commission. Liberty BV/RR is organized under Liberty Utilities Co.² (“Liberty Utilities”)
17 which is a Delaware corporation operated and regulated in the United States. Liberty Utilities
18 is a subsidiary of Liberty Utilities Canada Corp. (“Liberty Utilities Canada” or “LUC”).
19 Liberty Algonquin Business Services³ (“LUC-LABS”) is organized within LUC. The Arizona
20 utilities are wholly owned subsidiaries of Liberty South which is a wholly owned subsidiary of
21 Liberty Utilities⁴. Liberty South's place of business is 12725 W. Indian School Road, Suite D-
22 101, Avondale Arizona. APUC's distribution business group is Liberty Utilities Canada and
23 Liberty Utilities. APUC's electric generation business group operates as Algonquin Power

¹ Sewer is also referred to as Wastewater.

² Liberty Utilities has customers in 11 states throughout the United States.

³ LUC-LABS subsidiary provides business and corporate services to LUC and APCo.

⁴ Liberty utilities operated in Arizona are: Liberty Utilities (Black Mountain Sewer), Liberty Utilities (Litchfield Park Water and Sewer), Liberty Utilities (Rio Rico Water and Sewer), Bella Vista Water Company, Gold Canyon Sewer Company and Entrada del Oro Sewer Company.

1 Co. ("APCo"). APUC's corporate structure is provided below and in its Cost Allocation
2 Manual effective July 1, 2015 on page 2 of 33 (See Attachment 2).
3

4 Based on information contained in APUC's 2015 annual report, APUC is a \$5 billion in
5 Canadian dollar ("CAD") for electric generation, transmission and distribution utility
6 company based in Oakville, Ontario. APUC subsidiaries own and operate regulated utilities
7 in the United States, and own non-regulated generation facilities and regulated electric
8 transmission and natural gas pipelines throughout the United States and Canada. The
9 distribution business group operates in the United States as Liberty Utilities and provides rate
10 regulated water, electricity and natural gas utility services to over 560,000 connections⁵. The
11 electric generation business group operates as Algonquin Power Co. and owns or has
12 interests in a portfolio of North American based contracted wind, solar, hydroelectric and
13 natural gas powered generating facilities representing more than 1,185 MW of installed
14 capacity. The transmission business group invests in rate regulated electric transmission and
15 natural gas pipeline systems in the United States and Canada. APUC is the ultimate parent of
16 Bella Vista and Rio Rico, is an unregulated publically traded corporation (on the Toronto
17 Stock Exchange) with \$5 billion in assets and more than \$1 billion in annual revenues.
18

19 **Q. What are the primary reasons for the Liberty BV/RR requested permanent rate**
20 **increases?**

21 **A.** According to Liberty BV/RR, the primary reasons are that the revenues from its utility
22 operations are presently inadequate to provide a fair rate of return on the fair value of its
23 utility plant and property devoted to public service. Operating expenses have caused the

⁵ The total of 560,000 connections is 486,000 connections plus 80,000 connections with the recently announced planned acquisition of the Empire District, which provides electric services to customers in Missouri, Kansas, Oklahoma, and Arkansas.

1 revenue produced by the current rates and charges for service to become inadequate to meet
2 operating expenses and provide a reasonable rate of return.

3
4 **CONSUMER SERVICE**

5 **Q. Please provide a brief history of customer complaints received by the Commission**
6 **regarding Bella Vista.**

7 A. Staff reviewed the Commission's records and found that, as of January 1, 2013 through May
8 2, 2016, there were ten complaints filed.

9
10 2013 Two Complaints – (one billing issue and one disconnect issue).

11 2014 Zero Complaints.

12 2015 Six Complaints – (four billing issues, one new line service/main line extension, one
13 quality of service/field premise visit).

14 2016 Zero Complaints.

15 One Opinion OPPOSED to the proposed rate increase.

16 All complaints have been resolved and closed.

17
18 **Q. Please provide a brief history of customer complaints received by the Commission**
19 **regarding Rio Rico Water.**

20 A. Staff reviewed the Commission's records and found that, as of January 1, 2013 through April
21 28, 2016, there were eight complaints filed.

22
23 2013 Three Complaints – (three billing issues).

24 2014 One Complaint – (one billing issues).

25 2015 Zero Complaints.

26 2016 Two Complaints – (two billing issues).

27 Two Opinions OPPOSED to the proposed rate increase.

28 Two complaints remain open (pending investigations). All complaints have been resolved
29 and closed.

30

1 **Q. Please provide a brief history of customer complaints received by the Commission**
2 **regarding Rio Rico Sewer.**

3 A. Staff reviewed the Commission's records and found that, as of January 1, 2013 through April
4 28, 2016, there were no complaints filed for Rio Rico Sewer.
5

6 **COMPLIANCE**

7 **Q. Please provide a summary of the compliance status of Bella Vista.**

8 A. A check of the ACC's Compliance Database indicates that there are currently no
9 delinquencies for Bella Vista.
10

11 **Q. Please provide a summary of the compliance status of Rio Rico Water.**

12 A. A check of the ACC's Compliance Database indicates that there is currently one pending
13 issue for Rio Rico Water for copies of an Approval to Construct ("ATC") from the Arizona
14 Department of Environmental Quality for the plant necessary to serve the Windward
15 Development.
16

17 **Q. Please provide a summary of the compliance status of Rio Rico Sewer.**

18 A. A check of the ACC's Compliance Database indicates that there are currently no
19 delinquencies for Rio Rico Sewer.
20

21 **SUMMARY OF PROPOSED REVENUES**

22 **Q. Please summarize Bella Vista's filing.**

23 A. Bella Vista proposes total annual operating revenue of \$6,179,053. This represents an
24 increase of \$1,554,323, or 33.61 percent, over test year revenue of \$4,624,730. The proposed
25 revenue increase would produce an operating income of \$1,209,727 for a 9.16 percent rate of
26 return on adjusted original cost rate base ("OCRB") of \$13,205,189. The Company proposes

1 to OCRB as its Fair Value Rate Base ("FVRB"). Bella Vista's rate filing is based on the
2 twelve months ended December 31, 2014 ("test year").
3

4 **Q. Please summarize Rio Rico Water's filing.**

5 A. Rio Rico Water proposed a \$683,856, or 22.55 percent, revenue increase from \$3,032,792 to
6 \$3,716,648. The proposed revenue increase would produce an operating income of \$762,189
7 for an 8.60 percent rate of return on its proposed adjusted OCRB of \$8,861,632. The
8 Company proposes to use OCRB as its FVRB. Rio Rico Water's rate filing is based on the
9 twelve months ended December 31, 2014 ("test year").
10

11 **Q. Please summarize Rio Rico Sewer's filing.**

12 A. Rio Rico Sewer proposed a \$226,351, or 15.31 percent, revenue increase from \$1,478,323 to
13 \$1,704,674. The proposed revenue increase would produce an operating income of \$460,616
14 for an 8.60 percent rate of return on its proposed adjusted OCRB of \$5,355,381. The
15 Company proposes to use OCRB as its FVRB. Rio Rico Sewer's rate filing is based on the
16 twelve months ended December 31, 2014 ("test year").
17

18 **Q. Please summarize Staff's recommended revenue for Bella Vista.**

19 A. Staff recommends a \$607,597, or 13.14 percent, revenue increase from \$4,624,730 to
20 \$5,232,327. Staff's recommended revenue increase would produce an operating income of
21 \$889,329 for a 7.55 percent rate of return on a Staff adjusted OCRB of \$11,779,194.
22

23 **Q. Please summarize Staff's recommended revenue for Rio Rico Water.**

24 A. Staff recommends a \$412,298, or 13.59 percent, revenue increase from \$3,032,792 to
25 \$3,445,090. Staff's recommended revenue increase would produce an operating income of
26 \$699,594 for a 7.55 percent rate of return on a Staff adjusted OCRB of \$9,266,140.

1 **Q. Please summarize Staff's recommended revenue for Rio Rico Sewer.**

2 A. Staff recommends a decrease of \$20,025, or a 1.35 percent, revenue decrease from \$1,478,323
3 to \$1,458,298. Staff's recommended revenue decrease would produce an operating income of
4 \$370,334 for a 7.55 percent rate of return on a Staff adjusted OCRB of \$4,905,082.

5
6 **Q. Are there significant changes in corporate allocations that were disclosed by Liberty**
7 **BV/RR through the audit process that impact this rate filing?**

8 A. Yes. For example, Liberty BV/RR has stated in responses to Staff's data requests TBH 2.7,
9 TBH 2.7 supplemental, TBH 4.1, TBH 4.2, and TBH 4.2 supplemental that the Company will
10 make appropriate adjustments in its rebuttal testimony. Based on that, Staff will address
11 these issues in its surrebuttal testimony.

12
13 **Q. Please summarize Staff's rate base and operating income adjustments for Liberty**
14 **BV/RR.**

15 A. Staff's adjustments to rate base and operating expenses address the following:

16
17 *Rate Base Adjustments:*

18
19 Allocated Corporate Plant from Parent Company, Canadian Affiliates and the allocated LU
20 Sub Corporate Plant and the Accumulated Depreciation for the Corporate Plant – These
21 adjustments decrease plant in service and involve reduction in the level of allocated corporate
22 plant to the Company and the 4-Factor allocation percentage. Plant in service decrease in
23 Bella Vista by \$127,739 with a 10.9646 allocation percentage, Rio Rico Water by \$113,357
24 with a 6.3910 allocation percentage and Rio Rico Sewer by \$47,758 with a 2.6925 allocation
25 percentage.

26

1 Reclassification of Plant Additions – This adjustment has no net effect to plant in service in
2 Bella Vista. These reclassification adjustments increase plant in service by \$493,422 in Rio
3 Rico Water and decrease plant in service by \$493,422 in Rio Rico Sewer. The adjustments to
4 Rio Rico are due to a misclassification of plant in service between the different divisions.
5 Staff's adjustments reclassify plant additions to the appropriate divisional plant accounts.

6
7 Plant Adjustments, Plant in Service – These adjustments increase plant in service to reflect
8 the amount of Post-Test Year ("PTY") plant additions through December 31, 2015 and the
9 Company's corrections to estimated accruals. Plant in service increase in Bella Vista by
10 \$241,102, Rio Rico Water by \$642,967 and Rio Rico Sewer by \$68,175.

11
12 Unsupported Plant Additions – These adjustments decrease plant in service to reflect the
13 removal of recorded plant costs that were not supported by invoices or other types of source
14 documentation. Plant in service decrease in Bella Vista by \$268,664, Rio Rico Water by \$0
15 and Rio Rico Sewer by \$16,516.

16
17 PTY Plant Not Used and Useful – This adjustment decrease plant in service in Bella Vista by
18 \$2,808 to reflect plant that was deemed not used and useful. This adjustments has no effect
19 on plant in service in Rio Rico Water and Rio Rico Sewer.

20
21 Removal of Indirect Overhead ("INDOH"), Plant in Service – This adjustment decreases
22 Plant in Service to reflect the removal of a portion of the recorded plant costs included an
23 indirect overhead. As a result, plant in service decreases in Bella Vista by \$796,449, Rio Rico
24 Water by \$488,728 and Rio Rico Sewer by \$69,138.

25

1 Accumulated Depreciation – This adjustment reflects Staff's calculation of accumulated
2 depreciation based on Staff's adjustments to plant. Staff's adjustment to Corporate Plant is
3 reflected in TBH-5 Rate Base Adjustment No. 1 and Staff's development of appropriate
4 accumulated depreciation reserve was based on the date the plant was acquired. Bella Vista's
5 accumulated depreciation balance in its application includes an unaccounted balance of
6 \$125,026. Staff separately included this balance as unaccounted accumulated depreciation.

7
8 Net plant in service decreases in Bella Vista by \$35,886 and Rio Rico Water by \$47,061. Plant
9 in service increase in Rio Rico Sewer by \$9,013.

10
11 Advances in Aid of Construction ("AIAC") – This adjustment decreases AIAC in Bella Vista
12 by \$519,226 to reflect Staff's reclassification of AIAC that was not fully refunded after ten
13 years to Contributions in aid of Construction, consistent with the Company's tariff.

14
15 Contributions in aid of Construction ("CIAC") and Accumulated Amortization of CIAC –
16 This adjustment decreases gross CIAC in Bella Vista by \$17,772 due to an error by the
17 Company, and adjusts the accumulated amortization of CIAC in Bella Vista by \$43,714 as the
18 result of Staff's recommendation to transfer AIAC that was not fully refunded after ten years
19 to the CIAC account and an error by the Company.

20
21 Accumulated Deferred Income Taxes ("ADIT") – This adjustment is the result of reflecting
22 Staff's calculation of the ADIT using the Staff recommended plant, accumulated
23 depreciation, CIAC, and AIAC balances as well as the Staff recommended income tax rates.
24 ADIT increases in Bella Vista by \$505,413, and Rio Rico Water by \$147,815. ADIT decrease
25 in Rio Rico Sewer by \$104,114.
26

1 Cash Working Capital ("CWC") – This adjustment decreases cash working capital to reflect
2 the inclusion of interest expense and the removal of rate case expense from the lead-lag
3 study. Driven by the CWC calculation, rate base decreases in Bella Vista by \$27,211 and Rio
4 Rico Water by \$29,041. CWC increase in Rio Rico Sewer by \$13,259.

5
6 *Operating Income Adjustments*

7
8 Corporate Allocations from LUC, APUC and LUC-LABS – Contractual Services -
9 Professional – These adjustments decrease operating expenses to adjust the Company's
10 proposed corporate expenses allocation for non-labor and labor costs to reflect reasonable
11 corporate expenses for inclusion in rates. Operating expense decreases in Bella Vista by
12 \$119,160, Rio Rico Water by \$75,587 and Rio Rico Sewer by \$26,596.

13
14 LU 8020 Contractual Services - Professional – These adjustments decrease operating
15 expenses to remove costs inadvertently miscalculated by the Company at the wrong 4-Factor
16 Allocation percentages for Liberty BV/RR. Operating expense decreases in Bella Vista by
17 \$136,916, Rio Rico Water by \$111,276 and Rio Rico Sewer by \$7,313.

18
19 Reclassification of Affiliate Labor Costs for LU 8020 – These adjustments have no net effect
20 on operating expenses. This adjustment reclassifies expenses recorded in Contractual
21 Services – Professional to account Contractual Services – Other for direct labor for the
22 Company's water systems.

23
24 Corporate Cost Adjustment – These adjustments decrease operating expenses to only adjust
25 the increased labor costs to include one year at 3 percent for adjusted Contractual Services –

1 Professional and Contractual Services – Other for LU 8020. Operating expense decreases in
2 Bella Vista by \$45,297, Rio Rico Water by \$21,342 and Rio Rico Sewer by \$1,427.

3
4 Contractual Service – Professional HRIS Capital Labor for Corporate Plant – These
5 adjustments decrease operating expenses to remove costs that were included in Corporate
6 Plant Account No. 940.1 for the Human Resources Information System (“HRIS”). Staff
7 applied a 4-Factor Allocation percentage to the total amount for Arizona Capital Labor.
8 Operating expense decreases in Bella Vista by \$6,146, Rio Rico Water by \$3,582 and Rio Rico
9 Sewer by \$1,509.

10
11 Incentive Pay – These adjustments decrease operating expenses to adjust for removal of half
12 the incentive pay, and also to reflect that Staff applied a 4-Factor Allocation percentage to the
13 total amount of incentive pay. Operating expense decreases in Bella Vista by \$34,867, Rio
14 Rico Water by \$20,323 and Rio Rico Sewer by \$8,562.

15
16 Contractual Service – Indirect Overhead – These adjustments increase operating expenses to
17 include a portion of the Development Services and Engineering labor costs from LU 8020.
18 Staff applied a 4-Factor Allocation percentage. Operating expense increases in Bella Vista by
19 \$50,566, Rio Rico Water by \$29,474 and Rio Rico Sewer by \$12,417.

20 Miscellaneous Expenses – This adjustment has no net effect on operating expenses. This
21 adjustment reclassifies \$12,173 in miscellaneous expense for water testing costs to
22 Contractual Services – Testing for Bella Vista.

23
24 Purchased Wastewater Treatment – This adjustment has no net effect on operating expenses.
25 This adjustment reclassifies \$108,999 in Contractual Services - Others to Purchased
26 Wastewater Treatment for Rio Rico Sewer.

1 Contractual Services - Testing – These adjustments decrease operating expenses to reflect
2 Staff Engineer's calculation of annual testing costs. Operating expense decreases Bella Vista
3 by \$51,518 and Rio Rico Water by \$2,394.

4
5 Depreciation Expense – These adjustments to depreciation expenses reflects Staff's
6 calculation of depreciation expense using Staff's recommended depreciation rates and Staff's
7 recommended plant and CIAC balances. Operating expense decreases Bella Vista by \$91,282
8 and Rio Rico Sewer by \$68,139. Operating expense increase Rio Rico Water by \$40,245.

9
10 Property Tax Expense – These adjustments to the Company's property tax expenses reflect
11 Staff's calculation of the Company's property tax expense. There are no increases in test year
12 for Bella Vista, Rio Rico Water and Rio Rico Sewer.

13
14 Income Tax Expense – This adjustment decreases operating expenses to reflect the income
15 tax obligation on Staff's adjusted test year taxable income. Operating expense increases in
16 Bella Vista by \$176,005, Rio Rico Water and Rio Rico Sewer by \$39,418.

17
18 **COST ALLOCATIONS**

19 *Algonquin Power & Utilities Corporation*

20 **Q. Has the issue of cost allocations from Algonquin Power & Utilities Corporation**
21 **(“APUC”) and its subsidiaries been addressed by the Commission before in previous**
22 **rate cases?**

23 **A. Yes**
24

Previous Commission Decisions Denying Shareholder Costs

Q. What are the previous Commission decisions that denied shareholder costs (i.e. Investor Relations, Director Fees and Insurance, Escrow and Transfer Fees, Other Professional Services, and Office Administration)?

A. In brief, the Decisions are as follows:

1. Black Mountain Sewer Corporation, Decision No. 71865, page 25, lines 4 through 38.
2. Litchfield Park Service Company, Decision No. 72026, page 49, lines 7 through 28.
3. Rio Rico Utilities, Inc., Decision No. 72059, beginning at page 22, line 17 and ending on page 23 line 15.
4. Bella Vista Water Company, Decision No. 72251, beginning at page 28, line 18 and ending on page 29 line 6.

Q. To help the Commission understand the reason why corporate or common cost allocations are a significant issue and point of contention in the pending Bella Vista and Rio Rico rate cases, please explain in general why large, diverse, parent companies, like APUC choose to centralize some of their operational activities and allocate these out to the subsidiaries that utilize the common or centralized services?

A. APUC's primary business is the direct interest and equity ownership in renewable and thermal power generating facilities and regulated utilities. APUC owns a widely diversified portfolio of independent power production facilities⁶ and regulated utilities⁷ consisting of water distribution, wastewater treatment facilities, electric and gas utilities. Essentially, APUC acquires unregulated and regulated utilities and the subsidiaries operate these acquired utilities.

⁶ All power production (i.e. generation) facilities are found within Algonquin Power Company ("APCo") within the APUC corporate structure.

⁷ All distribution utilities are found within Liberty Utilities (Canada) Corp ("LUC") within the APUC corporate structure.

1 **Q. Can you now explain generally, how such common or shared costs are allocated or**
2 **distributed to the various subsidiaries that utilize these common or shared services?**

3 A. Yes. Whenever, and to the extent reasonably possible, shared service costs are first allocated
4 or assigned directly to the entity that is clearly the cost causer, such as when a cost is incurred
5 specifically to support the operational needs of a specific entity. The remaining common
6 costs are then allocated to the collective cost causers based upon a reasonable set of
7 allocation factors.

8
9 Obviously, it is important to ratepayers to assure that the basis for such cost allocations are
10 reasonable and that the actual cost allocators are evaluated as needed to maintain the fair
11 allocation to ALL entities that share these common services. Operating characteristics
12 change over time, especially for large companies that are constantly acquiring new operating
13 divisions or revising their internal operating structures.

14
15 It is interesting and important to note that within the Liberty/APUC Cost Allocation Manual
16 or "CAM," which I will discuss in more detail later in my testimony, it specifically
17 acknowledges the legitimacy of any jurisdictional regulatory authority's need to audit
18 transactions between the regulated entities and its affiliates.

19
20 I have attached a copy of page 21 of 26 of the CAM⁸ included in the rate case application (See
21 Attachment 1) which is quite specific as to the need for maintaining an audit trail and the
22 right of the regulatory auditor, and not the audited utilities to determine what information is
23 relevant for a particular audit objective. Also, within Section E (3) of the Company's CAM,
24 jurisdictional regulatory authorities, such as the ACC, are specifically acknowledged as having
25 the right to request an independent attestation engagement of the CAM.

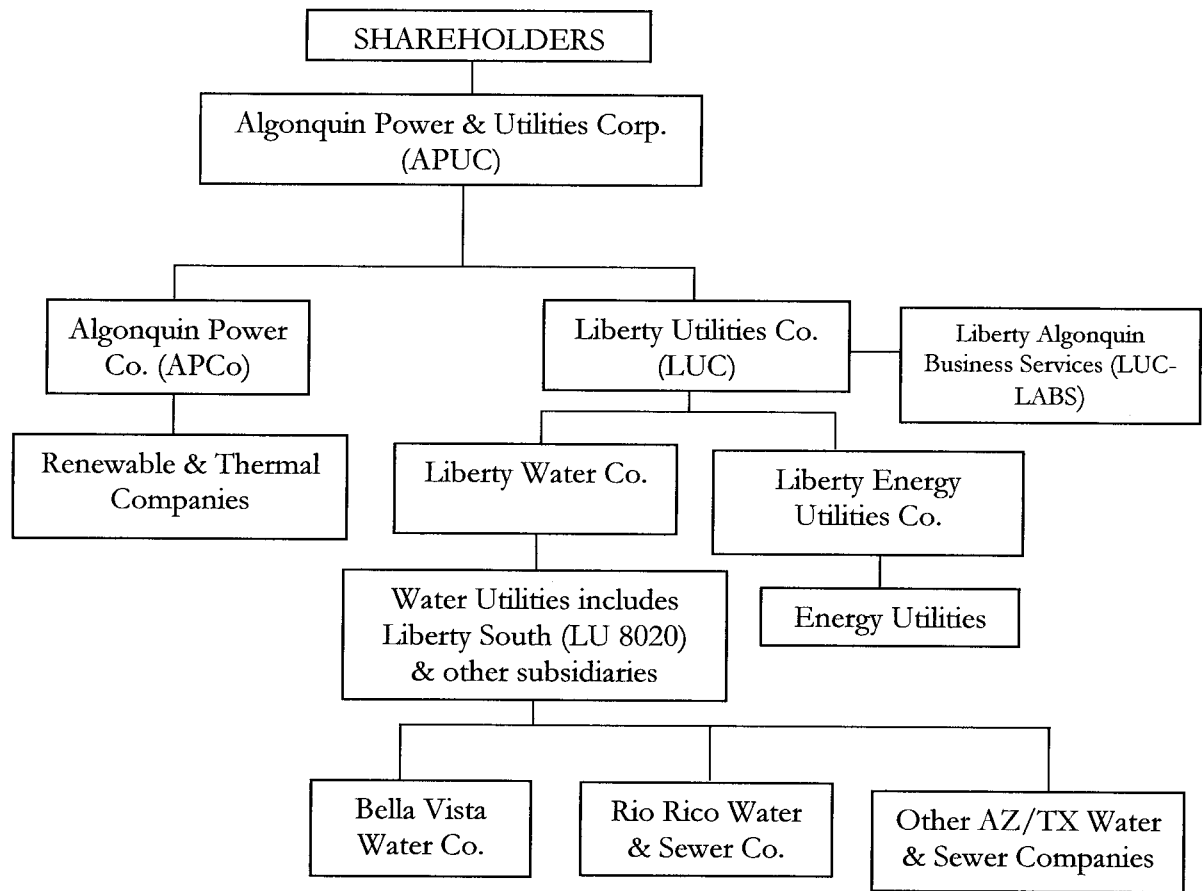
⁸ APUC Cost Allocation Manual included in the application is effective January 1, 2014. However, APUC's new Cost Allocation Manual provided in the Company's response to Staff's data request TBH 4.28 is effective July 1, 2015.

1 **Q. During the course of Staff's audit of the pending Bella Vista and Rio Rico rate cases,**
2 **did the Company acknowledge that material elements of its initially allocated**
3 **common or shared costs are going to need to be revised?**

4 A. Yes. For example, in the Company's response to data requests issued by Staff TBH 2.7, TBH
5 2.7 supplemental, TBH 4.1, TBH 4.2, TBH 4.2 supplemental, and based on the conversation
6 with Company representatives, the Company has acknowledged that both the allocation to
7 Liberty South and the allocations from Liberty South to Bella Vista and Rio Rico will be
8 changing. The Company will make appropriate adjustments in its rebuttal testimony.
9 Further, the Company has indicated that it was not planning on updating or amending its rate
10 increase request or filed Schedules until it files its rebuttal case. As a result, Staff is now faced
11 with filing its direct case and addressing possible positions and recommendation that it knows
12 will need to be updated after the Company's rebuttal case is filed. I would note that
13 throughout the remainder of my testimony many of Staff's recommendations will need to be
14 updated as a part of Staff's surrebuttal filing.

15
16 **Q. In order for the Commission to fully understand and follow your discussions and**
17 **recommendations regarding cost allocations from and through the Bella Vista and**
18 **Rio Rico parent and affiliated companies, did Staff develop a diagram to describe the**
19 **position of Bella Vista and Rio Rico Water and Sewer Company ("Rio Rico") within**
20 **APUC corporate structure?**

21 A. Yes. Please refer to diagram of the corporate structure provided below:
22
23
24
25
26



15 **Q. Who are APUC's two wholly owned operating subsidiaries?**

16 A. APUC's two wholly owned operating subsidiaries are Algonquin Power Company ("APCo")
17 and Liberty Utilities Canada ("LUC").
18

19 **Q. Does LUC have an additional corporate entity that charges costs to affiliates?**

20 A. Yes, Liberty Algonquin Business Services ("LUC-LABS") is organized within LUC. LUC-
21 LABS provide business and corporate services to LUC and APCo.
22

23 **Q. Please describe APUC's two wholly owned operating subsidiaries.**

24 A. APCo is an unregulated generation business that owns or has ownership interests in
25 hydroelectric, wind, solar, and thermal energy facilities. LUC is an unregulated business that

owns regulated water, natural gas and electric transmission and distribution utilities. It currently operates in 11 states throughout the United States.

Q. Did APUC allocate costs incurred at the Canadian Corporate level (i.e., shareholder costs) to Bella Vista and Rio Rico? If so, please describe how the APUC, LUC and LUC-LABS corporate charges are allocated to Bella Vista and Rio Rico?

A. Yes. Corporate direct expenses are recorded in NARUC expense account Contractual Service – Professional. Corporate indirect overhead (“INDOH”) expenses are recorded in the Plant accounts such as Structures and Improvements and Pumping Equipment. Additionally, corporate depreciation is allocated. Liberty South applies the 4-Factor allocation to Bella Vista at 10.9646 percent, Rio Rico Water at 6.3910 percent and Rio Rico Sewer at 2.6925 percent as shown in Table 1.

Q. What are the corporate allocated costs from LUC, APUC and LUC-LABS?

A. Per the Company’s response to Staff’s data request TBH 4.2 the corporate allocated costs are as follows:

Table 1: Per DR TBH 4.2 - 2014 APUC Allocated Corporate Costs to Bella Vista and Rio Rico using the 4-Factor allocation in U.S. Dollars					
	Corporate Affiliate Adjusted Balances	Bella Vista	Rio Rico Water	Rio Rico Sewer	Total LUC, APUC & LUC-LABS Allocated Corporate Costs
1	LUC Allocation Expenses	\$55,677.27	\$32,452.75	\$13,672.30	\$101,802.32
2	APUC Allocation Expenses	\$53,021.13	\$30,904.56	\$13,020.05	\$96,945.74
3	LUC-LABS Allocation Expenses	\$85,740.51	\$49,975.79	\$21,054.73	\$156,771.03
4	LUC, APUC & LUC-LABS Corporate Labor Adjustment	(\$5,680.91)	\$2,820.90	(\$4,060.08)	(\$6,920.09)
5	Total	\$188,758.00	\$116,154.00	\$43,687.00	\$348,599.00

1 **Q. What are the total LUC, APUC and LUC-LABS corporate costs allocated to each**
2 **Company during the test year?**

3 A. The total LUC, APUC and LUC-LABS allocated corporate costs during the test year to each
4 Company are shown in Table 1 line 5.

5
6 **Q. What are the total LUC, APUC and LUC-LABS corporate costs that were allocated to**
7 **Liberty South during the test year?**

8 A. The total LUC, APUC and LUC-LABS allocated corporate costs during the test year to
9 Liberty South is \$1,787,460 as shown in Table 2 line 4 with an average total percentage of
10 80.93 percent.

11
12 **Q. Are there additional corporate costs that LUC, APUC and LUC-LABS that were**
13 **allocated to Liberty South during the test year and then to Bella Vista and Rio Rico?**
14 **If so, please explain.**

15 A. Yes, the additional corporate costs LUC, APUC and LUC-LABS that was allocated to Liberty
16 South during the test year and then to Bella Vista and Rio Rico is provided below in Table 3
17 for INDOH and Table 4 for Depreciation.

18
19 **Q. What are the total corporate allocated expenses from LUC, APUC and LUC-LABS to**
20 **Liberty South?**

21 A. Per the Company's response to Staff's data request TBH 4.2 the corporate allocated costs are
22 as follows:
23

Total and Average Total Percentage of Allocated Expenses from LUC, APUC and LUC-LABS to Liberty South

Table 2: 2014 Total Expenses to Liberty South			
	Corporate Affiliate Adjusted Balances	Liberty South	% of Adjusted Total Expenses
1	LUC Allocation Expenses	\$507,790.33	79.40%
2	APUC Allocation Expenses	\$495,601.80	83.20%
3	LUC-LABS Allocation Expenses	\$784,068.29	80.19%
4	Total and Average Total Percentage	\$1,787,460.42	80.93%

Total and Average Total Percentage of INDOH of the total expenses from LUC, APUC and LUC-LABS to Liberty South

Table 3: Total INDOH to Liberty South			
	Corporate Affiliate Adjusted Balances	Liberty South	% of Adjusted Total Expenses
1	LUC Allocation INDOH	\$68,293.28	13.45%
2	APUC Allocation INDOH	\$100,065.26	16.80%
3	LUC-LABS Allocation INDOH	\$146,223.99	14.96%
4	Total and Average Total Percentage	\$314,582.53	15.07%

Total and Average Total Percentage of Depreciation of the total expenses from LUC, APUC and LUC-LABS to Liberty South

Table 4: Total Depreciation to Liberty South			
	Corporate Affiliate Adjusted Balances	Liberty South	% of Adjusted Total Expenses
1	LUC Allocation Depreciation	\$63,526.86	12.51%
2	APUC Allocation Depreciation	\$0	0.00%
3	LUC-LABS Allocation Depreciation	\$47,435.44	4.85%
4	Total and Average Total Percentage	\$110,962.30	5.79%

Q. What allocated corporate costs does Staff agree should be included in the corporate allocated costs to Liberty South?

A. Staff agrees that the following non-labor and labor corporate allocated costs should be properly allocated to Liberty South. Staff reviewed the Company's response to its data requests and supplemental responses to TBH 2.7 and TBH 4.2 to determine the amount of the corporate allocated costs during the test year to Liberty South as shown below in Table 5:

Table 5: Per DR TBH 4.2 - Staff Allowable Corporate Allocation to Liberty South in U.S. Dollars						
	Staff Allowable Expenses (Non-Labor and Labor Costs)	Total LUC, APUC & LUC-LABS Allowable Expenses	Liberty South Allocation at 16.17%	Bella Vista Water at 10.9646%	Rio Rico Water at 6.3910%	Rio Rico Sewer at 2.6925
1	Tax Services	\$499,134.37	\$80,710.03	\$8,849.53	\$5,158.18	\$2,173.12
2	Legal/Regulatory	\$585,496.50	\$94,678.17	\$10,381.08	\$6,050.88	\$2,549.21
3	Audit/Accounting	\$2,581,852.95	\$417,507.37	\$45,778.01	\$26,682.90	\$11,241.39
4	License Fees & Permits	\$258,475.23	\$41,852.68	\$4,588.98	\$2,674.80	\$1,126.88
5	Total	\$3,924,959.05	\$634,748.24	\$69,597.61	\$40,566.76	\$17,090.60

Q. For the remaining shareholder costs (i.e. Investor Relations, Director Fees and Insurance, Escrow and Transfer Fees, Other Professional Services, and Office Administration), why do the Companies request recovery through rates?

A. The Companies' position is that those costs provide a benefit in the form of access to capital to Bella Vista and Rio Rico customers and, therefore, are appropriate to recover through rates. Staff has generally opposed such recoveries.

Q. Does Staff agree with the Companies that the shareholder costs should now be recovered through rates?

A. No. On four occasions the Commission has disallowed the recovery of what are basically shareholder costs. Further, in this instance Staff believes that the Company has failed to establish the reasonableness of the cost allocation factors used to allocate these costs. APUC is a large Company that is clearly in an acquisition mode as evidenced by the pending acquisition of the Empire District Electric Company through a \$2.4 billion acquisition offer. APUC's access to the capital market needs and related communications to current and future stock holders clearly relate to the APUC acquisition posture and Arizona water and wastewater customers should not be burdened by any of these costs. Also, stock and debt issuance costs are already captured within the effective debt and equity costs which Arizona ratepayers already pay.

Further, the allocated shareholder costs constitute related party transactions that are not allocated consistent with the cost causation principle, and as such, are not consistent with the NARUC Guidelines for Cost Allocations and Affiliate Transactions ("NARUC Guidelines").

RATE BASE

Fair Value Rate Base

Q. Did Liberty BV/RR prepare a schedule showing independently developed elements of a Reconstruction Cost New Rate Base?

A. No. The Companies requested that its OCRB be treated as its fair value rate base.

Rate Base Summary

Q. Please summarize Staff's adjustments to Liberty BV/RR's rate base shown on Schedules TBH-3 and TBH-4.

A. Staff's adjustments to Liberty BV/RR's rate base resulted in a net decrease. Plant in service decreases in Bella Vista by \$1,425,993, and Rio Rico Sewer by \$450,299. Plant in service increase in Rio Rico Water by \$404,508. This adjustment was primarily due to (1) Staff's adjustments to Corporate Plant, (2) Staff's reclassification of plant, (3) Staff's adjustments to plant additions included PTY plant and corrections of estimated accruals, (4) Staff's removal of unsupported plant, (5) Staff's adjustment for PTY plant deemed not used and useful, (6) Staff's removal of indirect overhead from plant additions including post-test year plant additions, (7) Staff's adjustments to accumulated depreciation, (8) Staff's conversion of AIAC to CIAC, (9) Staff's adjustment to CIAC and the associated amortization, (10) Staff's adjustment to the ADIT, and (11) Staff's adjustments to cash working capital.

1 **Q. Has Staff completed its review of the documentation?**

2 A. No, because of the timing of the receipt of documentation from the Company, Staff was not
3 provided sufficient time to review the information prior to the filing of its Direct Testimony.
4 Staff will need to review the information provided and, in addition, may also need to send
5 follow-up data requests and may make additional adjustments as warranted.

6
7 *Rate Base Adjustment BV, RRW, and RRS Nos. 1 – Allocated Corporate Plant from the Parent Company*

8 **Q. What is the definition of a plant asset?**

9 A. In general, it is an item that a company directly owns or that it has acquired through a capital
10 lease.

11
12 **Q. Have Bella Vista and Rio Rico made a pro forma adjustment to include plant**
13 **allocated from its parent company?**

14 A. Yes, Bella Vista has proposed to include \$239,793 in plant allocated from its parent company
15 and \$192,057 in plant from Liberty South. The total plant allocated is \$431,850. Rio Rico
16 Water has proposed to include \$161,372 in plant allocated from its parent company and
17 \$129,248 in plant from Liberty South. The total plant allocated is \$290,620. Rio Rico Sewer
18 has proposed to include \$67,986 in plant allocated from its parent company and \$54,453 in
19 plant from Liberty South. The total plant allocated is \$122,439.

20
21 **Q. During the course of the audit, did Staff discover any errors in the calculations in the**
22 **allocations of the plant to the Companies? If so, please explain.**

23 A. Yes, Staff discovered that the Companies failed to convert the original cost for Corporate
24 Plant from the Parent Company for Land and Land Rights in Account No. 903 and
25 Structures and Improvements in Account No. 904 to U.S. dollars. Additionally, Staff
26 removed the leasehold improvements for two tenants occupying more than half of the

1 building square footage in allocated original cost, as shown on Schedules BV TBH-5, RRW
2 TBH-5, and RRS TBH-5.

3
4 **Q. Did Staff make any additional adjustments to Corporate Plant in Accounts No. 903**
5 **and No. 904?**

6 A. Yes, Staff believes that the appropriate operational support facilities cost is to include a
7 reasonable portion of these costs based on the services provided to Liberty South customers.
8 Staff reviewed the Companies confidential responses to data requests and supplement
9 responses to BV TBH 2.7, RR TBH 2.7, BV TBH 4.2, RR TBH 4.2, BV TBH 5.1 and RR
10 TBH 6.1. Additionally, Staff adjusted to the 4-Factor allocation⁹ percentage. Staff
11 recommends that only a portion of the total square footage utilized and allocated to LUC
12 employees be considered, as shown on Schedules BV TBH-5, RRW TBH-5, and RRS TBH-5.

13
14 **Q. What is Staff's total adjustment for Corporate and Liberty South Plant in Accounts**
15 **No. 903 and No. 904?**

16 A. Staff's adjustments to account no. 903 result in decreases in Bella Vista by \$15,852, Rio Rico
17 Water by \$11,108 and Rio Rico Sewer by \$4,680. Staff's adjustments to account no. 904
18 resulted in a total decrease in Bella Vista by \$139,208, Rio Rico Water by \$101,417 and Rio
19 Rico Sewer by \$42,727. Staff adjusted Liberty South to the 4-Factor allocation of 10.9646
20 percent for Bella Vista. Staff recommends that only a portion of the total square footage
21 utilized and allocated to LUC employees be considered as shown on Schedule TBH-5.

22

⁹ The percentage for Bella Vista is 10.9646, Rio Rico Water is 6.3910 and Rio Rico Sewer is 2.6925. These percentages are used throughout the Company's applications and supporting workpapers. The combined percentages for Bella Vista, Northern Sunrise and Southern Sunrise is 10.9646. These percentages are representative of the allocations for Liberty Sub Corp with the inclusion of the Missouri and Illinois factors included in the allocation as of December 31 2013.

1 **Q. Did Staff make any adjustments to Liberty BV/RR for Liberty South Plant in Account**
2 **No. 940?**

3 A. Yes, Staff adjusted the Office Furniture to the 4-Factor allocation of 10.9646 percent. These
4 adjustments resulted in an increase in Bella Vista by \$3,774.

5
6 **Q. Did Staff make any adjustments to Liberty BV/RR for Corporate and Liberty South**
7 **Plant in Account No. 940.1?**

8 A. Yes, Staff's adjustments to account no. 940.1 include an increase in account no. 904 for
9 Corporate Plant of \$3,594 and an increase of \$19,953 in Liberty South for Bella Vista. Staff
10 adjusted the Computers and Software for the Human Resource Information System
11 ("HRIS") to the 4-Factor allocation of 10.9646 percent for plant in both the Corporate and
12 Liberty South. Additionally, Staff adjustment includes utilizing the same conversion rates to
13 U.S. Dollars. This adjustment resulted in an increase by \$19,953 that is included in the total
14 adjustment of \$23,547 as shown on Schedule TBH-5 for Bella Vista. Staff's adjustments to
15 Rio Rico resulted in a decrease in Rio Rico Water by \$832 and Rio Rico Sewer by \$351.

16
17 **Q. Has Staff completed its review of the documentation?**

18 A. No, because of the timing of the receipt of documentation from the Companies, Staff was
19 not provided sufficient time to review the information prior to the filing of its Direct
20 Testimony. Staff will need to review the information provided and, in addition, may also
21 need to send follow-up data requests and may make additional adjustments as warranted.

22
23 **Q. What is Staff's recommendation?**

24 A. Staff recommends decreasing plant in service by decreases in Bella Vista by \$127,739 with a
25 10.9646 allocation percentage, Rio Rico Water by \$113,357 with a 6.3910 allocation
26 percentage and Rio Rico Sewer by \$47,758 with a 2.6925 allocation percentage. These

1 adjustments reflect a decrease in plant in service and involve reductions in the level of
2 corporate plant to the Companies and a 4-Factor allocation percentage, as shown on
3 Schedules BV TBH-5, RRW TBH-5, and RRS TBH-5.
4

5 *Rate Base Adjustment BV, RRW, RRS and Nos. 2 - Reclassification of Plant Additions, Plant in Service*

6 **Q. During the course of the audit, did Staff identify any plant that was recorded in an**
7 **inappropriate plant account?**

8 A. Yes.
9

10 **Q. What was the basis of Staff's determination?**

11 A. Staff reviewed the documentation provided and identified plant that required reclassification
12 to the appropriate plant accounts. Further, the NARUC USOA requires that plant costs be
13 placed in the correct plant account. Proper classification will ensure that depreciation
14 expense will be calculated using the correct depreciation rates.
15

16 **Q. What was effect of the reclassifications on Liberty BV/RR?**

17 A. The reclassifications in Bella Vista have no net effect on plant in service. The reclassifications
18 increase plant in service by \$493,422 in Rio Rico Water and decrease plant in service by
19 \$493,422 in Rio Rico Sewer. The adjustments to Rio Rico are due to the misclassification of
20 plant in service between the different divisions.
21

22 **Q. What is Staff recommending?**

23 A. Staff recommends the reclassification of plant to the appropriate plant accounts, as shown on
24 Schedules BV TBH-6, RRW TBH-6, and RRS TBH-6.
25

Rate Base Adjustment BV, RRW and RRS Nos. 3 - Plant Adjustments, Plant in Service

Q. During the course of its audit, did Staff identify any additional plant that required adjustments to the recorded plant balances?

A. Yes. Staff required significant additional time during the regulatory audit to identify and request corrections from the Companies for estimated accruals for plant additions. Staff included the plant additions for PTY plant. The Companies provided all requested corrections from Staff.

Q. What did Staff identify as additional plant that required an adjustment to plant balances?

A. Staff reviewed the documentation provided and identified plant that required plant additions for both PTY plant and corrections to estimated accruals for plant. Staff's adjustment increases plant in service in Bella Vista by \$241,102, Rio Rico Water by \$642,967 and Rio Rico Sewer by \$68,175 to reflect the amount of PTY plant additions through December 31, 2015, and the Company's corrections to estimated accruals.

Q. What is Staff recommending?

A. Staff recommends increasing plant in service in Bella Vista by \$241,102, Rio Rico Water by \$642,967 and Rio Rico Sewer by \$68,175 as shown on Schedules TBH-4 and TBH-7. Staff further recommends that the Companies be put on notice that estimated accruals should be corrected to support the recorded plant balances prior to the filing of its next rate case. Staff further recommends that the Companies be required to file an amended rate case to correct for the estimated accruals if determined to be significant, as shown on Schedules BV TBH-7, RRW TBH-7, and RRS TBH-7.

1 *Rate Base Adjustment BV and RRS Nos. 4 - Unsupported Plant, Plant in Service*

2 **Q. Is it a requirement that plant costs be supported?**

3 A. Yes. The Arizona Administrative Code R14-2-610 D.1 states, “Each utility shall keep general
4 and auxiliary accounting records reflecting the cost of its properties . . . and all other
5 accounting and statistical data necessary to give complete and authentic information as to its
6 properties . . .” (Emphasis added).

7
8 **Q. During its audit, did Staff identify plant costs which the Companies could not**
9 **adequately support?**

10 A. Yes. Companies were unable to support in Bella Vista by \$268,664, Rio Rico Water by \$0
11 and Rio Rico Sewer by \$16,516. A majority of these adjustments are due to the estimated
12 accruals the Company was unable to support with required documentation. Source
13 documents are essential records for verifying plant costs. In the absence of supporting
14 documentation, the Company’s plant balances cannot be verified.

15
16 **Q. Should the inadequately supported plant costs be removed from rate base?**

17 A. Yes. It is the Companies’ responsibility to support its claimed costs. If unsupported costs
18 are not removed, ratepayers are at risk of paying for non-existent or overstated costs.

19
20 **Q. What is Staff’s recommendation?**

21 A. Staff recommends decreasing plant in service in Bella Vista by \$268,664, Rio Rico Water by
22 \$0 and Rio Rico Sewer by \$16,516 as shown on Schedules BV TBH-8 and RRS TBH-8.
23 These adjustments decrease plant in service to reflect the removal of recorded plant costs that
24 were not supported by invoices or other types of source documentation, as shown on
25 Schedules BV TBH-8 and RRS TBH-8.

26

Rate Base Adjustment BV No. 5 – Post-Test Year (“PTY”) Plant Not Used and Useful

Q. Did Staff make an adjustment to plant that was not used and useful?

A. Yes.

Q. What adjustment did Staff make?

A. Staff identified \$2,808 in PTY plant in Bella Vista that was deemed not used and useful as shown on Schedule BV TBH-9.

Q. Why did Staff make this adjustment?

A. Michael Thompson, Staff’s Engineer assigned to the Bella Vista rate case, inspected the entire system and identified blanket projects deemed not used and useful.

Q. What is Staff’s recommendation?

A. Staff recommends decreasing plant in service in Bella Vista by \$2,808 to remove a specific blanket project from rate base that was deemed not used and useful as shown on Schedules BV TBH-9.

Rate Base Adjustment BV No. 6, RRW No. 4 and RRS No. No. 5 - Indirect Overhead, Plant in Service (“INDOH”)

Q. What guidance should companies use in accounting for utility plant – overhead construction costs and determining whether a cost should be capitalized by recording it in a plant account?

A. The Arizona Administrative Code R14-2-411 D.2 requires water companies to maintain their accounting records in accordance with the NARUC USOA. The rule states, “Each utility shall maintain its books and records in conformity with the Uniform System of Accounts for Class A, B, C and D Water Utilities” (emphasis added).

1 NARUC USOA provides accounting instructions for utility plant – overhead construction
2 costs states that “All overhead construction costs, such as engineering, supervision, general
3 office salaries and expense, construction engineering and supervision by other than the
4 accounting utility, legal expenses, insurance, injuries and damages, relief and pensions, taxes
5 and allowance for funds used during construction, shall be charged to particular jobs or units
6 on the basis of the amounts of such overheads reasonably applicable thereto, so that each job
7 or unit shall bear its equitable proportion of such costs and that the entire costs of the unit,
8 both direct and overhead, shall be deducted from the plant accounts at the time the property
9 is retired.”

10
11 Further, the NARUC USOA provides accounting instructions for utility plant – overhead
12 construction costs states that “the determination of payroll charges includible in construction
13 overheads shall be on time card distributions thereof. Where this procedure is impractical,
14 special studies shall be made periodically of the time supervisory employees devoted to
15 construction activities so that only such overhead costs as have a definite relation to
16 construction shall be capitalized. The addition to direct construction costs of arbitrary
17 percentages or amounts to cover assumed overhead costs is not permitted.”

18
19 Lastly, the NARUC USOA provides accounting instructions for utility plant – overhead
20 construction costs states that “the records supporting the entries for overhead construction
21 costs shall be kept so as to show the total amount of each overhead for each year, the nature
22 and amount of each overhead expenditure charged to each construction work order and to
23 each utility plant account, and the basis of distribution of such costs.”
24

1 **Q. What types of expenses are included in the indirect overhead costs (INDOH) pools**
2 **that are allocated to plant in service?**

3 A. Office rent for the Engineering and Development services, general office expenses, any
4 remaining LU 8020 Engineering and Development Services labor costs and labor burden that
5 has not been direct charged and Corporate Allocations from LUC, APUC and LUC- LABS
6 (Table 3) of approximately 15 percent of all expenses allocated from LUC, APUC and LUC-
7 LABS to LU 8020.

8
9 **Q. Does the Companies provide any support for their capitalization procedures manual?**

10 A. Yes. The Companies provided Staff in response to data requests BV TBH 4.16 and RR TBH
11 4.17 a copy of Liberty Utilities Capitalization Procedure.

12
13 **Q. Does their capitalization procedures manual address indirect overheads? If so, please**
14 **explain.**

15 A. Yes. In section 8.0 Indirect Overheads includes an excerpt from FERC, CFR 18, Part 101,
16 Plant Instructions No. 3, Item 12 and Plant Instruction No. 4.

17
18 **Q. Does the FERC's plant instructions apply to Water and Wastewater Utilities?**

19 A. No. See the NARUC USOA accounting instructions provided above.

20
21 **Q. Does Staff believe that the Companies total indirect overhead costs (INDOH) pool is**
22 **reasonable to be capitalized, according to the NARUC USOA?**

23 A. No. Staff believes that only reasonable, appropriate, accurate and properly supported costs
24 be included in the indirect overhead costs pool. The costs should be traceable and the
25 Companies should be able to provide Staff an audit trail to trace the costs. Some of the
26 appropriate costs could include Liberty South general office administrative costs with a time

1 study as stated in the NARUC accounting instruction, office rent and general office expenses
2 for the separate Engineering and Development building.

3
4 Further, as already noted, Staff believes that the overheads charge to a particular project must
5 bear, or manifest, a reasonable relationship to the underlying capitalized costs. In other
6 words the overheads charged must be appropriate and should not just represent a blanket
7 allocation of a pool of costs which do not have a link back to the other elements of
8 capitalized costs. For example if company employee labor is charged to a capital project then
9 it would be reasonable to find that employee cost overheads would also be charged to this
10 project but that the level of such labor overheads would mathematically correlate with the
11 level of labor being capitalized. Expenses that cannot be reasonably correlated with specific
12 project activities should not be included in overheads charged to a project.

13
14 **Q. During the course of the audit, did Staff review the amount of increases to the plant**
15 **accounts due to the additional indirect overheads (INDOH) by the Companies? If**
16 **so, please explain.**

17 A. Yes. Staff reviewed the increases to the plant accounts for the additional indirect overheads
18 and in several plant accounts the increases amounted to more than 30 percent added to
19 original costs.

20
21 **Q. During the course of the audit, did Staff review the amount of increases to the plant**
22 **accounts due to the additional indirect overheads (INDOH) by the Companies? If so,**
23 **please explain.**

24 A. Yes. Staff reviewed the increases to the plant accounts for the additional indirect overheads
25 and in several plant accounts the increases were more than 25 percent added to original costs
26

1 **Q. Please provide an example for illustrative purposes only.**

2 A. The Company adds a new pump and the cost of parts and labor throughout the year is
3 \$10,000. The Company adds the indirect overhead (INDOH) costs throughout the year
4 totaling \$2,500. The total cost of the new pump at the end of that year is \$12,500.

5
6 **Q. Has Staff completed its review of the documentation?**

7 A. No, because of the timing of the receipt of documentation from the Companies, Staff was
8 not provided sufficient time to review the information prior to the filing of its Direct
9 Testimony. Staff will need to review the information provided and, in addition, may also
10 need to send follow-up data requests and may make additional adjustments as warranted.
11 Staff believes that a periodic independent audits of a Company's process for capitalizing
12 overheads is a reasonable management action and recommends that the Commission makes a
13 directive to the Company to undertake an independent audit of its CAM procedures should
14 also include a specific review of the Company's capital project overhead process and that
15 such an audit should also cover 2015 activity.

16
17 **Q. Should unverified costs be removed from plant in service?**

18 A. Yes, they should. If unsupported costs are not removed, ratepayers are at risk of paying for
19 non-existent or overstated costs. Therefore, Staff has removed the regulatory assets pending
20 completion of its audit. Once the audit is complete, Staff will make any changes to its
21 recommendation in Staff's Surrebuttal Testimony.

22
23 **Q. What is Staff's recommendation?**

24 A. Staff recommends decreasing plant in service in Bella Vista by \$796,449, Rio Rico Water by
25 \$488,728 and Rio Rico Sewer by \$69,138. These adjustments decrease plant in service to
26 reflect the removal of a portion of recorded plant costs included as indirect overhead. As a

1 result, plant in service decreases to remove all indirect overhead, as shown on Schedules BV
2 TBH-10, RRW TBH-8, and RRS TBH-9. Further Staff recommends that the Commission's
3 directive to the Company to undertake an independent audit of its CAM procedures should
4 also include a specific review of the Company's capital project overhead process and that
5 such an audit should also cover 2015 activity.

6
7 *Rate Base Adjustment BV No. 7 – Plant Retirements*

8 **Q. Did Staff make any adjustments to Bella Vista's plant in service due to retirements?**

9 A. Yes. In the Company's response to Staff's data request TBH 4.27, the Company stated it was
10 in error and Staff made an adjustment to decrease plant in service for pumping equipment by
11 \$36,183 in Bella Vista.

12
13 **Q. What is Staff recommending?**

14 A. Staff recommends decreasing plant in service by \$36,183 in Bella Vista to reflect Staff's
15 retirement of pumping equipment on Schedule BV TBH-11.

16
17 *Rate Base Adjustment BV No. 12, RRW and RRS Nos BV No. 8, RRW and RRS Nos. 6 - Accumulated*
18 *Depreciation*

19 **Q. What adjustments did Staff make to Accumulated Depreciation?**

20 A. Staff adjusted accumulated depreciation to reflect Staff's adjustment to plant during the test
21 year. Staff's adjustment to Corporate Plant is reflected in TBH-5 Rate Base Adjustment No.
22 1 and Staff's development of appropriate accumulated depreciation reserve was based on the
23 date the plant was acquired. Staff made an additional adjustment to increase accumulated
24 depreciation by \$125,026 in order to reconcile the Company's Schedules B-1 to the B-2 p4 in
25 Bella Vista. Bella Vista's accumulated depreciation balance in its application includes an

1 unaccounted balance of \$125,026. Staff separately included this balance as unaccounted
2 accumulated depreciation.

3
4 **Q. Did the Company address the difference in the accumulated depreciation difference**
5 **of \$125,026 in its responses to data requests?**

6 A. Yes, The Company stated in its response to RUCO data request RUCO 2.1 that it would
7 address this issue in its rebuttal testimony.

8
9 **Q. Did Staff have any additional issues with accumulated depreciation? If so, please**
10 **explain.**

11 A. Yes, Staff requested through the data request process for the Companies to provide a
12 breakdown in Account No. 320 - Water Treatment Equipment and Account No. 330 -
13 Distribution Reservoirs and Standpipes into the sub-categories. The breakdown has not been
14 provided and therefore Staff continues to apply a lower depreciation rate. The Companies'
15 rate application currently uses the lower depreciation rate.

16
17 **Q. Should the Companies provide a breakdown of each of the accounts listed above? If**
18 **so, please explain.**

19 A. Yes, Staff should be provided the appropriate sub-categories for these accounts in order to
20 apply the appropriate depreciation rates recommended by the Staff's Engineers.

21
22 **Q. Did Staff adjust the accumulated depreciation for Corporate and Liberty South Plant?**

23 A. Yes, Staff's adjustments are included in the total depreciation as shown on Schedules BV
24 TBH-12, RRW TBH-10, and RRS TBH-10. Staff's calculation of accumulated depreciation is
25 based on Staff's adjustments to plant in service for corporate plant and the date the plant was
26 placed in service.

1 **Q. What is Staff's recommendation?**

2 A. Staff recommends decreasing accumulated depreciation in Bella Vista by \$35,886 and Rio
3 Rico Water by \$47,061. Accumulated depreciation should increase in Rio Rico Sewer by
4 \$9,013. These adjustments are shown on Schedules BV TBH-12, RRW TBH-10, and RRS
5 TBH-10. Staff further recommends that the Companies breakdown the plant in Account No.
6 320 - Water Treatment Equipment and Account No. 330 - Distribution Reservoirs and
7 Standpipes into the sub-categories for both Bella Vista and Rio Rico. Staff further
8 recommends that the Companies provide this breakdown within 180 days of the decisions in
9 these cases as a compliance item.

10
11 *Rate Base Adjustment BV No. 9 – Advances In Aid of Construction (“ALAC”)*

12 **Q. What did Bella Vista propose for AIAC?**

13 A. The Company proposed \$9,114,847 for AIAC.

14
15 **Q. Did Staff make any adjustments to Bella Vista's proposed \$9,114,847 amount?**

16 A. Yes, Staff transferred \$519,226 in AIAC to Contributions in aid of Construction (“CIAC”) in
17 Bella Vista.

18
19 **Q. Please discuss Staff's adjustment to transfer \$519,226 in AIAC to CIAC in Bella Vista.**

20 A. Staff reviewed the Company's response to its the data request TBH 2.25 and the refunding to
21 the AIAC contracts, contract dates and determined these accounts were not receiving
22 refunds. Therefore Staff transferred \$519,226 to CIAC in Bella Vista as shown on Schedule
23 BV TBH-13.

24

1 **Q. What is Staff recommending?**

2 A. Staff recommends decreasing AIAC by \$519,226 in Bella Vista to reflect Staff's
3 reclassification of AIAC that was not fully refunded after ten years to CIAC, consistent with
4 Company's tariff as shown on Schedule BV TBH-13.

5
6 *Rate Base Adjustment BV No. 10 – Contributions In Aid of Construction ("CIAC") and Amortization of CIAC*

7 **Q. What did the Company propose for CIAC and Amortization of CIAC in Bella Vista?**

8 A. The Company proposed \$579,988 for CIAC and \$304,864 for Amortization of CIAC in Bella
9 Vista.

10
11 **Q. What adjustment did Staff make to CIAC and Amortization of CIAC in Bella Vista?**

12 A. Consistent with Staff's Rate Base Adjustment No.8, Staff's recommendation to transfer
13 \$519,226 from AIAC to CIAC and increased Amortization of CIAC to recognize the related
14 \$8,882 amortization expense in Bella Vista as shown on Schedule BV TBH-14. Additionally,
15 in the Company's response to Staff's data request TBH 2.24 the Company stated a formula
16 error, and the accumulated amortization of CIAC. Staff decreased CIAC by \$17,772 and
17 increased the Amortization of CIAC by \$34,832 as shown on Schedule BV TBH-14.

18
19 **Q. What is Staff recommending?**

20 A. Staff recommends decreasing CIAC by \$17,772 and amortization of CIAC by \$43,714 in
21 Bella Vista as shown on Schedule BV TBH-14.

22
23 *Rate Base Adjustment BV No. 11, RRW and RRS Nos. 7 – Accumulated Deferred Income Taxes*

24 **Q. What are accumulated deferred income taxes ("ADITs")?**

25 A. ADITs are the accumulated computed tax differences between income taxes calculated for
26 book purposes and the actual income taxes that a company pays to the United States Treasury

1 and the State of Arizona. By definition, these differences are temporary and reverse over
2 time. The primary cause of the income tax difference is the straight line depreciation method
3 used for rate-making purposes and accelerated depreciation method used for Federal and
4 State income tax reporting purposes.

5
6 **Q. What ADIT balances are the Companies proposing to include in its rate bases?**

7 A. The Companies are proposing in Bella Vista is \$381,189, Rio Rico Water is \$1,121,537 and
8 Rio Rico Sewer is \$683,150.

9
10 **Q. Are Federal and State income tax returns necessary in order to audit the Company's**
11 **proposed ADIT?**

12 A. Yes. The Rate Case and Audit Manual prepared by the NARUC Staff Subcommittee on
13 Accounting and Finance states the following:

14
15 In looking at accumulated DIT¹⁰, the auditor should look at the
16 Schedule M of the federal (and possibly state) tax return, to determine
17 the types of items that are different between the IRS/State computed
18 taxes and taxes computed for regulatory purposes. One should then
19 follow these through the records and adjustments to determine that
20 they have been properly reflected in the accumulated DIT. One
21 should look for large changes in the accounts and determine why
22 these significant changes occurred, and whether they match other
23 items reflected on the income statement.¹¹

24
25 **Q. Did the Companies provide the tax returns?**

26 A. No.
27

¹⁰ Deferred Income Taxes ("DIT").

¹¹ Page 25 of the Rate Case and Audit Manual prepared by the NARUC Staff subcommittee on Accounting and Finance (2003) (available at http://www.naruc.org/publications/ratecase_manual.pdf).

1 **Q. Why did the Companies not provide the tax returns?**

2 A. The Companies stated that the tax returns were consolidated and so declined to provide
3 them.

4
5 **Q. Can Staff perform a complete audit of the tax basis of the plant without the tax**
6 **returns?**

7 A. No, it cannot. However, Staff is willing to work directly with the Companies in order to trace
8 the tax basis amounts into inclusion in the federal and possibly the state tax returns. This will
9 allow Staff to properly calculate ADIT.

10
11 **Q. What is Staff's recommendation?**

12 A. Because the tax schedules from the Companies were not provided, Staff estimated the ADIT
13 in its Direct Testimony utilizing the Company's schedules and information provided. If the
14 Companies provide the necessary information, Staff may require additional discovery and
15 may request additional information from the Companies. Staff will provide revisions in its
16 Surrebuttal Testimony. These adjustments are the result of reflecting Staff's calculation of the
17 ADIT using the Staff recommended plant, accumulated depreciation, CIAC, and AIAC
18 balances as well as the Staff recommended income tax rates. In the interim, Staff
19 recommends decreasing rate base as follows to reflect Staff's recommended ADIT that
20 results in an increase in Bella Vista by \$505,413 and Rio Rico Water by \$147,815. ADIT
21 increase in Rio Rico Sewer by \$104,114 as shown on Schedules BV TBH-15, RRW TBH-11,
22 and RRS TBH-11.

23

Rate Base Adjustment BV No. 12, RRW and RRS Nos. 8 – Cash Working Capital

Q. What amount of cash working capital is Liberty BV/RR proposing to include in rate base?

A. Liberty BV/RR is proposing to include cash working capital in rate base of: Bella Vista \$160,647, Rio Rico Water \$89,192 and Rio Rico Sewer \$11,300.

Q. What adjustments did Staff make?

A. Staff included the interest expenses from the Schedule D-2 provided in the rate application and payment information was provided in the Financing application provided in this consolidated docket for Liberty BV/RR. Staff also removed rate case expense consistent with the removal of rate case expense from the lead lag study.

Q. What is Staff recommending for Cash Working Capital?

A. Staff recommends decreasing cash working capital to reflect the inclusion of interest expense and the removal of rate case expense from the lead-lag study. Driven by the CWC calculation, rate base decreases in Bella Vista by \$27,211 and Rio Rico Water by \$29,041. Driven by the CWC calculation, rate base increases in Rio Rico Sewer by \$13,259 as shown on Schedules BV TBH-16, RRW TBH-12, and RRS TBH-12.

OPERATING INCOME

Operating Income Summary

Q. What are the results of Staff's analysis of Test Year revenues, expenses and operating income in Liberty BV/RR?

A. As shown on Bella Vista Schedules TBH-18 and TBH-19, Staff's analysis resulted in Test Year revenues of \$4,624,730, expenses of \$4,112,539 and operating income of \$512,191.

As shown on Rio Rico Water Schedules TBH-14 and TBH-15, Staff's analysis resulted in Test Year revenues of \$3,032,792, expenses of \$2,587,538 and operating income of \$442,254.

As shown on Rio Rico Sewer Schedules TBH-14 and TBH-15, Staff's analysis resulted in Test Year revenues of \$1,478,323, expenses of \$1,095,636 and operating income of \$382,687.

Q. Has Staff completed its review of the documentation?

A. No, because of the timing of the receipt of documentation from the Company, Staff was not provided sufficient time to review the information prior to the filing of its Direct Testimony. Staff will need to review the information provided and, in addition, may also need to send follow-up data requests and may make additional adjustments as warranted.

Operating Income Adjustment BV, RRW and RRS Nos. 1 – Corporate Expense Allocation

Q. What was the total amount of expense that was allocated from LUC, APUC and LUC-LABS to Liberty South during the test year?

A. The amount is \$1,787,460 as shown below in Table 2.

Total and Average Total Percentage of Allocated Expenses from LUC, APUC and LUC-LABS to Liberty South

Table 2: 2014 Total Expenses to Liberty South			
	Corporate Affiliate Adjusted Balances	Liberty South	% of Adjusted Total Expenses
1	LUC Allocation Expenses	\$507,790.33	79.40%
2	APUC Allocation Expenses	\$495,601.80	83.20%
3	LUC-LABS Allocation Expenses	\$784,068.29	80.19%
4	Total and Average Total Percentage	\$1,787,460.42	80.93%

Q. What was the total amount of expense that was allocated from LUC, APUC and LUC-LABS to Liberty South during the test year?

A. The amount is \$1,787,460 as shown below in Table 2.

Q. Are there additional adjustments to the total amount of expense that were allocated from LUC, APUC and LUC-LABS to Liberty South during the test year? If so, please explain.

A. Yes. There are additional adjustments such as a corporate labor adjustment that will need to be adjusted to the amount of \$1,787,460. Staff will make adjustments in surrebuttal testimony.

Q. What portion of this \$1,787,460 total was allocated from the LUC, APUC, LUC-LABS unregulated business operations to Bella Vista and Rio Rico during the test year?

A. According to the Company's response to data requests and supplemental responses to Liberty BV/RR TBH-4.2, Bella Vista was allocated \$188,758, Rio Rico Water was allocated \$116,154 and Rio Rico Sewer was allocated \$43,687 during the test year. The total allocated to all three companies is \$348,599.

Table 1: Per DR TBH 4.2 - 2014 APUC Allocated Corporate Costs to Bella Vista and Rio Rico using the 4-Factor allocation in U.S. Dollars

	Corporate Affiliate Adjusted Balances	Bella Vista	Rio Rico Water	Rio Rico Sewer	Total LUC, APUC & LUC-LABS Allocated Corporate Costs
1	LUC Allocation Expenses	\$55,677.27	\$32,452.75	\$13,672.30	\$101,802.32
2	APUC Allocation Expenses	\$53,021.13	\$30,904.56	\$13,020.05	\$96,945.74
3	LUC-LABS Allocation Expenses	\$85,740.51	\$49,975.79	\$21,054.73	\$156,771.03
4	LUC, APUC & LUC-LABS Corporate Labor Adjustment	(\$5,680.91)	\$2,820.90	(\$4,060.08)	(\$6,920.09)
5	Total	\$188,758.00	\$116,154.00	\$43,687.00	\$348,599.00

1 **Q. Does Staff agree with the Company's calculation of the methodology used to allocate**
2 **the corporate costs?**

3 A. No, Staff does not. The Commission, in Decision Nos. 71865, 72026, 72059, and 72251
4 disallowed certain costs that were directly caused by APUC unregulated business activities
5 and for which APUC would have continued to incur even if APUC did not own Liberty
6 BV/RR consistent with the NARUC Guidelines for Affiliate Transactions.

7
8 **Q. Did Staff adjust any of the LUC, APUC, and LUC-LABS corporate allocations**
9 **amounts? If so, please explain.**

10 A. Yes. Staff decreased Contractual Services – Professional in Bella Vista by \$119,160, Rio Rico
11 Water by \$75,587 and Rio Rico Sewer by \$26,596 to reflect the Staff allowable expenses
12 provided for in expenses provided below. Staff adjusted the LUC, APUC and LUC-LABS
13 allocations by the adjusted balances for each division as shown on Table 1. Staff's allowable
14 corporate allocations for each division are shown on Table 5. Bella Vista's total of \$188,758
15 less allowable expenses of \$69,598 equal the adjustment of \$119,160. Rio Rico Water's total
16 of \$116,154 less allowable expenses of \$40,567 equal the adjustment of \$75,587. Rio Rico
17 Sewer's total of \$43,687 less allowable expenses of \$17,091 equal the adjustment of \$26,596.

18

	Staff Allowable Expenses (Non-Labor and Labor Costs)	Total LUC, APUC & LUC-LABS Allowable Expenses	Liberty South Allocation at 16.17%	Bella Vista Water at 10.9646%	Rio Rico Water at 6.3910%	Rio Rico Sewer at 2.6925
1	Tax Services	\$499,134.37	\$80,710.03	\$8,849.53	\$5,158.18	\$2,173.12
2	Legal/Regulatory	\$585,496.50	\$94,678.17	\$10,381.08	\$6,050.88	\$2,549.21
3	Audit/Accounting	\$2,581,852.95	\$417,507.37	\$45,778.01	\$26,682.90	\$11,241.39
4	License Fees & Permits	\$258,475.23	\$41,852.68	\$4,588.98	\$2,674.80	\$1,126.88
5	Total	\$3,924,959.05	\$634,748.24	\$69,597.61	\$40,566.76	\$17,090.60

1 **Q. What is Staff's recommendation for the corporate allocations?**

2 A. Staff recommends the Contractual Services – Professional for LUC, APUC, and LUC-LABS
3 corporate expense allocation listed in Table 5 for Liberty BV/RR. Further, Staff
4 recommends that no LUC, APUC, LUC-LABS corporate expenses should be allocated to
5 indirect overhead expenses (INDOH). These adjustments decrease operating expenses to
6 adjust the Company's proposed corporate expenses allocation for non-labor and labor costs
7 to reflect reasonable corporate expenses due from ratepayers. Operating expense decreases
8 Bella Vista by \$119,160, Rio Rico Water by \$75,587 and Rio Rico Sewer by \$26,596 as shown
9 on Schedules BV TBH-20, RRW TBH-16, and RRS TBH-16.

10
11 *Operating Income Adjustment BV, RRW and RRS Nos. 2 – Contractual Services - Professional from Liberty*
12 *South*

13 **Q. What was the total amount of administrative expenses that should have been**
14 **allocated from Liberty South to Liberty BV/RR during the test year?**

15 A. The amount is \$4,027,790 as per the Companies' supplemental responses to BV/RR TBH
16 2.7.

17
18 **Q. Did Staff make any adjustments to the Contractual Services – Professional from**
19 **Liberty South to Liberty BV/RR? If so, please explain.**

20 A. Yes. The Companies inadvertently miscalculated at the wrong 4-Factor allocation
21 percentages resulting in higher allocations to Liberty BV/RR. Staff applied the 4-Factor
22 allocations resulting in decreases in Bella Vista by \$136,916, Rio Rico Water by \$111,276 and
23 Rio Rico Sewer by \$7,313.
24

1 **Q. What is Staff's recommendation for the contractual services - professional from**
2 **Liberty South?**

3 A. Staff recommends the contractual services – professional from Liberty South decrease
4 operating expenses in Bella Vista by \$136,916, Rio Rico Water by \$111,276 and Rio Rico
5 Sewer by \$7,313 as shown on Schedules BV TBH-21, RRW TBH-17, and RRS TBH-17.
6

7 *Operating Income Adjustment BV and RRW Nos. 3 – Corporate Labor Costs Reclassification*

8 **Q. During the course of its audit, did Staff identify any corporate labor costs that were**
9 **recorded in an inappropriate expense account?**

10 A. Yes.
11

12 **Q. What was the basis of Staff's determination?**

13 A. Staff reviewed the information and discussed the appropriate expense account with the
14 Companies during an office visit on April 21, 2016. These adjustments have no net effect on
15 operating expenses and merely reclassifies expenses recorded in Contractual Services –
16 Professional to account Contractual Services – Other for direct labor for the Company's
17 water systems. The Companies provided appropriate reclassification in the Companies
18 responses to TBH 5.1 and TBH 6.1.
19

20 **Q. What is Staff recommending?**

21 A. Staff recommends the reclassification of appropriate operating expenses as shown on
22 Schedules BV TBH-22 and RRW TBH-18.
23

Operating Income Adjustment BV, RRW and RRS Nos. 4 Corporate Cost Adjustment – Labor Increase

Q. What are the total amount of labor increases included in the Liberty BV/RR applications during the test year?

A. In Bella Vista's application it is proposing \$45,406 for Contractual Services – Professional and \$35,364 for Contractual Service – Other for a total of \$80,860. In Rio Rico Water's application it is proposing \$46,334 for Contractual Services – Professional and \$3,984 for Contractual Service – Other for a total of \$50,318. In Rio Rico Sewer's application it is proposing \$4,065 for Contractual Services – Professional and \$1,297 for Contractual Service – Other for a total of \$5,361. Liberty BV/RR proposes a 3 percent increase over two years (compounded) at 6.09 percent.

Q. What are the different affiliates included in this proposed labor increase during the test year?

A. Liberty BV/RR includes all of the following: LUC, APUC, LUC-LABS and Liberty South labor costs in the proposed labor cost increase.

Q. Did Staff include all of the affiliates listed above in Staff's recommended labor increase during the test year?

A. No. Staff included Liberty South labor costs in the recommended labor cost increase.

Q. Did Staff apply the Company's requested 6.09 percent increase during the test year to Staff's recommended labor cost increase?

A. No. Staff applied 3 percent to Liberty South labor costs for one year in the recommended labor cost increase which was the percent attributed to 2016 pay increases.

1 **Q. What is Staff recommending?**

2 A. Staff recommends a decrease in the operating expenses in Bella Vista by \$45,297, Rio Rico
3 Water by \$21,342 and Rio Rico Sewer by \$1,427 as shown on Schedules BV TBH-23, RRW
4 TBH-19, and RRS TBH-19. Staff adjusted the increased labor costs to one year at 3 percent
5 of the adjusted Contractual Services – Professional and Contractual Services – Other for
6 Liberty South.

7
8 *Operating Income Adjustment BV, RRW and RRS Nos. 6 Corporate Cost Adjustment – HRIS Capital Labor*

9 **Q. During the audit, did Staff identify plant costs in the Human Resources Information**
10 **System (“HRIS”) in plant account no. 940.1 - Computer and Software that included**
11 **Capital Labor from Arizona?**

12 A. Yes. The Corporate Plant for the HRIS in plant Account No. 940.1 for computers and
13 software included capital labor for Arizona corporate employees in the amount of \$56,054 are
14 included in the total cost of system. The capital labor cost from Arizona were incurred
15 during the test year as provided in the Company’s response to Staff’s data requests TBH 5.9,
16 TBH-7.4 and TBH 7.5.

17
18 **Q. Did Staff make adjustments due to these Arizona capital labor costs?**

19 A. Yes. Staff adjusted the Arizona corporate capital labor costs based on the 4-Factor allocation
20 percentages. The Companies included the corporate labor costs in both plant in service for
21 Corporate Plant and the expense account for Contractual Services – Professional.
22

1 **Q. What are the adjustments to Liberty BV/RR to Contractual Services – Professional**
2 **during the test year?**

3 A. Staff adjusted the Arizona corporate capital labor costs based on the 4-Factor allocation
4 percentages. Staff's adjustment decrease Contractual Services – Professional in Bella Vista by
5 \$6,146, Rio Rico Water by \$3,582 and Rio Rico Sewer by \$1,509.

6
7 **Q. What is Staff recommending?**

8 A. Staff recommends a decrease in the operating expenses in Bella Vista by \$6,146, Rio Rico
9 Water by \$3,582 and Rio Rico Sewer by \$1,509 as shown on Schedules BV TBH-25, RRW
10 TBH-21, and RRS TBH-21.

11
12 *Operating Income Adjustment BV, RRW and RRS Nos. 7 Corporate Cost Adjustment – Incentive Pay*

13 **Q. During the audit, did the Companies provide information about the total incentive**
14 **pay for Liberty South?**

15 A. Yes. In the Companies response to RUCO DR 2.7, the Companies stated that the incentive
16 pay per month is \$53,000 during the test year. The total incentive pay for 12 months during
17 the test year is \$636,000. In the Companies response to Staff's DR 2.34a, the Company
18 stated the incentive pay during the test year is \$624,000. Staff selected the higher amount.

19
20 **Q. Did Staff make adjustments due to the Liberty South incentive pay?**

21 A. Yes. Staff removed half of the incentive pay that should be paid by shareholders. Staff
22 adjusted the incentive pay by half and applied the 4-Factor allocation percentages. Staff's
23 adjustment decreases Contractual Services – Professional in Bella Vista by \$34,867, Rio Rico
24 Water by \$20,323 and Rio Rico Sewer by \$8,562.

25

1 **Q. What is Staff recommending?**

2 A. Staff recommends a decrease in the operating expenses in Bella Vista by \$34,867, Rio Rico
3 Water by \$20,323 and Rio Rico Sewer by \$8,562 as shown on Schedules BV TBH-26, RRW
4 TBH-22, and RRS TBH-22.

5
6 *Operating Income Adjustment BV, RRW and RRS Nos. 8 Contractual Services – INDOH*

7 **Q. Did Staff adjust all the INDOH from the plant accounts in the rate base adjustments**
8 **for Liberty BV/RR?**

9 A. Yes. Staff removed all the INDOH from the plant accounts. Staff will make adjustment in
10 Surrebuttal testimony to include appropriate costs. The Companies either direct charged or
11 included in the cost pools for INDOH for the Engineering and Development labor costs.

12
13 **Q. Did Liberty South include labor costs in the cost pool for INDOH in the plant**
14 **accounts for Liberty BV/RR?**

15 A. Yes. The Companies either direct charged or included in the cost pools for INDOH for the
16 Engineering and Development labor costs.

17
18 **Q. Did Staff make adjustments due to the Liberty South adjustments to INDOH in rate**
19 **base?**

20 A. Yes. Staff estimated half of the total labor costs were charged directly to work orders and
21 projects. The total Engineering and Development labor cost during the test year is \$922,355,
22 divided by 50 percent is \$461,177. Staff applied the 4-Factor allocation percentages to
23 \$461,177. Staff's adjustment increases Contractual Services – Professional in Bella Vista by
24 \$50,566, Rio Rico Water by \$29,474 and Rio Rico Sewer by \$12,417.

25

1 **Q. What is Staff recommending?**

2 A. Staff recommends an increase in the operating expenses in Bella Vista by \$50,566, Rio Rico
3 Water by \$29,474 and Rio Rico Sewer by \$12,417 as shown on Schedules BV TBH-27, RRW
4 TBH-23, and RRS TBH-23.

5
6 *Operating Income Adjustment BV No. 9 – Miscellaneous Expenses*

7 **Q. During the course of the audit, did Staff identify any miscellaneous expenses that**
8 **were recorded in an inappropriate expense account?**

9 A. Yes.

10
11 **Q. What was the basis of Staff's determination?**

12 A. Staff's Engineer identified water testing costs that were included in miscellaneous expenses.
13 Staff verified the water testing costs and reviewed accounting records provided. These
14 adjustments have no net effect on operating expenses and merely reclassifies expenses
15 recorded in Contractual Services – Water Testing from Miscellaneous expenses.

16
17 **Q. What is Staff recommending?**

18 A. Staff recommends the reclassification of \$12,173 in Bella Vista to the appropriate operating
19 expenses as shown on Schedule BV TBH-28.

20
21 *Operating Income Adjustment RRS No. 9 – Purchased Wastewater Treatment*

22 **Q. During the course of the audit, did Staff identify any Contractual Service Other in Rio**
23 **Rico Sewer that were recorded in an inappropriate expense account?**

24 A. Yes.
25

1 **Q. What was the basis of Staff's determination?**

2 A. Staff verified that the Contractual Services – Other for Rio Rico Sewer included purchased
3 wastewater treatment provided by the City of Nogales. Staff reclassified \$108,999 from
4 Contractual Services – Other to Purchased Wastewater Treatment. These adjustments have
5 no net effect on operating expenses and merely reclassifies expenses to the appropriate
6 expense accounts.

7
8 **Q. What is Staff recommending?**

9 A. Staff recommends the reclassification of \$108,999 in Rio Rico Sewer to the appropriate
10 operating expenses as shown on Schedules RRS TBH-24.

11
12 *Operating Income Adjustment BV No. 10 and RRW No. 9 – Contractual Services - Testing*

13 **Q. Did the Staff's Engineer determine the amount for Contractual Services – Testing in**
14 **his Engineering Report and testimony?**

15 A. Yes.

16
17 **Q. Did Staff make adjustments to the Contractual Services – Testing in the test year?**

18 A. Yes. Staff made an adjustment to reflect the Staff's Engineers calculation of annual testing
19 cost.

20
21 **Q. What is Staff recommending?**

22 A. Staff recommends a decrease to operating expenses to reflect Staff Engineer's calculation of
23 annual testing costs. Operating expenses decrease in Bella Vista by \$51,518 and Rio Rico
24 Water by \$2,394 as shown on Schedules BV TBH-29 and RRW TBH-24.

25

Operating Income Adjustment BV No. 13, RRW and RRS Nos. 11 – Depreciation Expense

Q. What is Liberty BV/RR proposing for depreciation expense?

A. Bella Vista is proposing depreciation expense of \$1,175,263. Rio Rico Water is proposing depreciation expense of \$562,211. Rio Rico Sewer is proposing depreciation expense of \$326,172.

Q. What adjustment did Staff make to depreciation expense?

A. Staff adjusted depreciation expense to reflect application of the Staff-recommended depreciation rates to the Staff recommended plant balances. Staff's adjustments to depreciation expenses reflect Staff's calculation of depreciation expense using Staff's recommended depreciation rates and Staff's recommended plant and CIAC balances.

Q. What is Staff's recommendation?

A. Staff recommends decreasing depreciation expense in Bella Vista by \$91,282 and Rio Rico Sewer by \$68,139. Staff recommends increasing depreciation expense in Rio Rico Water by \$40,245 as shown on Schedules BV TBH-32, RRW TBH-26, and RRS TBH-26.

Operating Income Adjustment BV No. 14, RRW and RRS Nos. 12 – Property Taxes

Q. What is Liberty BV/RR proposing for Property Taxes?

A. Bella Vista is proposing property taxes expense of \$148,997. Rio Rico Water is proposing property taxes expense of \$155,057. Rio Rico Sewer is proposing property taxes expense of \$75,741.

1 **Q. Did Staff make any adjustment to the Property Tax Expense?**

2 A. Yes. Staff's adjustment reflects Staff's calculation of the property tax expense using Staff's
3 recommended revenues, as shown on Schedules BV TBH-33, RRW TBH-27, and RRS TBH-
4 27.

5
6 **Q. What is Staff's recommendation?**

7 A. Staff recommends no increase in the test year as shown on Schedules BV TBH-33, RRW
8 TBH-27, and RRS TBH-27.

9
10 *Operating Income Adjustment BV No. 15, RRW and RRS Nos. 13 – Income Taxes*

11 **Q. What is the Liberty BV/RR proposing for test year Income Tax Expense?**

12 A. Bella Vista is proposing income taxes expense of \$55,166. Rio Rico Water is proposing
13 income taxes expense of \$147,142. Rio Rico Sewer is proposing income taxes expense of
14 \$157,337.

15
16 **Q. Did Staff make any adjustments to test year Income Tax Expense?**

17 A. Yes. Staff's adjustment reflects Staff's calculation of the income tax expense based upon
18 Staff's adjusted test year taxable income, as shown on Schedule BV TBH-15. Staff's
19 adjustment decreases operating expenses to reflect the income tax obligation on Staff's
20 adjusted test year taxable income.

21
22 **Q. What is Staff's recommendation?**

23 A. Staff recommends increasing test year Income Tax Expense in Bella Vista by \$176,005, Rio
24 Rico Water \$59,823 and Rio Rico Water by \$39,418 as shown on Schedules BV TBH-34,
25 RRW TBH-28, and RRS TBH-28.

26

1 **OTHER MATTERS**

2 *Fair Value Arizona Rate Evaluation Model*

3 **Q. The Companies propose approval of a FARE rate making mechanism. Will Staff will**
4 **be providing analysis and related recommendations regarding the FARE rate making**
5 **mechanism?**

6 A. Mr. James Armstrong is presenting Staff's analysis and related recommendations on the
7 FARE rate making mechanism.

8
9 *Purchased Power Adjustor Mechanism ("PPAM")*

10 **Q. Has the Company requested a PPAM?**

11 A. Yes.

12
13 **Q. What is a PPAM?**

14 A. It is an adjustor mechanism that allows a utility to track fluctuations in its cost of power. In a
15 rate case, the cost of power is determined and that cost is included in regular base rates.
16 Then fluctuations from that cost are tracked and recorded and the adjustor mechanism allows
17 the utility to bill its customers for costs of power above that set in the rate case or credit its
18 customers for costs below that set in the rate case.

19
20 **Q. What reasons did the Companies provide for requesting the PPAM?**

21 A. The PPAM allows the applicants to increase rates in order to recover increases in purchased
22 power costs resulting from increase in the rates charged from its electric utility providers.

23
24 **Q. What is Staff's recommendation?**

25 A. Staff recommends approval of the Company's proposed PPAM.
26

Property Taxes Adjustor Mechanism ("PTAM")

Q. Has the Company requested a PTAM?

A. Yes.

Q. What is a PTAM?

A. It is an adjustor mechanism that allows utility rates to adjust, up or down, based on changes in the property tax rates and/or assessment ratios.

Q. What reasons did the Companies provide for requesting the PTAM?

A. The PTAM allows the applicants to increase rates in order to recover increases in property taxes resulting from increase in the property tax rates and/or assessment ratios.

Q. Has there been a problem in the past with the way Staff traditionally computed the higher property taxes that result from higher authorized revenues?

A. No, not that I am aware of. This methodology usually provides an added benefit to water and wastewater companies because it has a forward looking component which is based on Staff's recommended revenue. Simply put, it usually increases test year property tax expenses.

Q. What is Staff's recommendation?

A. Staff recommends denial of the Company's proposed PTAM.

Low Income Tariff

Q. Are the Companies proposing a low income tariff?

A. Yes.

1 **Q. Please describe the proposal.**

2 A. The Companies are proposing to continue the existing low income tariffs for Bella Vista and
3 Rio Rico, with each proposal being based upon the already existing low income tariff. The
4 existing low income tariff provides for a discount of 15 percent applied to a qualified
5 customer's total bill before any adjustments or application of any other taxes, credit, penalties
6 or fees.

7
8 **Q. What would be the primary factor in determining ratepayer eligibility for this**
9 **program?**

10 A. The primary factor would be the combined gross income of all persons living in the
11 household.

12
13 **Q. How are the Company's gross annual house hold income limits determined?**

14 A. The Company's proposed income guidelines are based on 150 percent of the federal poverty
15 guidelines.

16
17 **Q. What are the draw backs to a low income tariff?**

18 A. All non-participants will subsidize the low income households in the Company's service area.

19
20 **Q. How will this be accomplished?**

21 A. Through a separate surcharge on the non-participant's bills identified as a "Low Income
22 Assistance Charge."

23
24 **Q. Was Bella Vista's low income tariff approved in a previous decision?**

25 A. Yes. Bella Vista's low income tariff was approved in Decision No. 72251.

26

1 **Q. Did Bella Vista implement the surcharge approved in Decision No. 72251?**

2 A. No. Per the Company's response to data request TBH 4.31, Bella Vista to implement the
3 surcharge on February 14, 2013 in Docket No. W-20453A-09-0412. The Commission never
4 processed this request.

5
6 **Q. Did Staff research the unprocessed request discussed above for the implementation of**
7 **the surcharge approved in Decision No. 72251?**

8 A. Yes. Commission Staff is currently waiting for Bella Vista to file corrections to rates and
9 charges.

10
11 **Q. Was Rio Rico's low income tariff approved in a previous decision?**

12 A. Yes. Rio Rico's low income tariff was approved in Decision No. 72059.

13
14 **Q. Did Rio Rico's Decision No. 73996 discuss the low income tariff?**

15 A. No. Rio Rico's low income tariff was not required or requested per the ordering paragraphs
16 in Decision No. 73996. Therefore, the low income tariff should not have been filed as a
17 compliance item for Rio Rico in this decision. No approval was issued per this decision.

18
19 **Q. Are there additional issues with the collection of low income tariffs from ratepayers?**

20 A. Yes. Both Bella Vista and Rio Rico state there is an uncollected balance and Staff is in the
21 process of obtaining additional information. Therefore, Staff will address these issues in
22 Staff's surrebuttal testimony.

23
24 **Q. Has Staff completed its review of the documentation?**

25 A. No, because of the timing of the receipt of documentation from the Company, Staff was not
26 provided sufficient time to review the information prior to the filing of its Direct Testimony.

1 Staff will need to review the information provided and, in addition, may also need to send
2 follow-up data requests and may make additional adjustments as warranted.

3

4 **Q. What is Staff's recommendation?**

5 A. Staff continues to recommend approval of the low income tariff for both Bella Vista and Rio
6 Rico. Staff will address the additional issues raised by the Company in Staff's surrebuttal
7 testimony.

8

9 **Q. Does this conclude your Direct Testimony?**

10 A. Yes, it does.

Liberty Utilities (Bella Vista Water) Corp.

Docket No. W-02465A-15-0367

Test Year December 31, 2014

Schedules

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]
		COMPANY ORIGINAL COST	COMPANY FAIR VALUE	STAFF ORIGINAL COST	STAFF FAIR VALUE
1	Adjusted Rate Base	\$13,205,187	\$13,205,187	\$11,779,194	\$11,779,194
2	Adjusted Operating Income (Loss)	\$253,574	\$253,574	\$512,191	\$512,191
3	Current Rate of Return (L2 / L1)	1.92%	1.92%	4.35%	4.35%
4	Required Rate of Return	9.16%	9.16%	7.55%	7.55%
5	Required Operating Income (L4 * L1)	\$1,209,727	\$1,209,727	\$889,329	\$889,329
6	Operating Income Deficiency (L5 - L2)	\$956,153	\$956,153	\$377,138	\$377,138
7	Gross Revenue Conversion Factor	1.6256	1.6256	1.6111	1.6111
8	Required Revenue Increase (L7 * L6)	\$1,554,323	\$1,554,323	\$607,597	\$607,597
9	Adjusted Test Year Revenue	\$4,624,730	\$4,624,730	\$4,624,730	\$4,624,730
10	Proposed Annual Revenue (L8 + L9)	\$6,179,053	\$6,179,053	\$5,232,327	\$5,232,327
11	Required Increase in Revenue (%)	33.61%	33.61%	13.14%	13.14%

References:

Column [A]: Company Schedule B-1

Column [B]: Company Schedule B-1

Column [C]: Staff Schedules OCRB, GRCE, TYOI & COC

Column [D]: Staff Schedules OCRB, GRCE, TYOI & COC

GROSS REVENUE CONVERSION FACTOR				
LINE NO.	DESCRIPTION	[A]	[B]	[C]
	<u>Calculation of Gross Revenue Conversion Factor:</u>			
1	Revenue	100.0000%		
2	Uncollectible Factor (Line 11)	0.0000%		
3	Revenues (L1 - L2)	100.0000%		
4	Combined Federal and State Tax Rate (L17) + Property Tax Factor (L22)	37.9295%		
5	Subtotal (L3 - L4)	62.0705%		
6	Revenue Conversion Factor (L1 / L5)	1.6111		
	<u>Calculation of Uncollectible Factor:</u>			
7	Unity	100.0000%		
8	Combined Federal and State Tax Rate (L17)	37.2340%		
9	One Minus Combined Income Tax Rate (L7 - L8)	62.7660%		
10	Uncollectible Rate	0.0000%		
11	Uncollectible Factor (L9 * L10)	0		
	<u>Calculation of Effective Tax Rate:</u>			
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%		
13	Arizona State Income Tax Rate	4.9000%		
14	Federal Taxable Income (L12 - L13)	95.1000%		
15	Applicable Federal Income Tax Rate (L44)	34.0000%		
16	Effective Federal Income Tax Rate (L14 * L15)	32.3340%		
17	Combined Federal and State Income Tax Rate (L13 + L16)	37.2340%		
	<u>Calculation of Effective Property Tax Factor:</u>			
18	Unity	100.0000%		
19	Combined Federal and State Tax Rate (L17)	37.2340%		
20	One Minus Combined Income Tax Rate (L18 - L19)	62.7660%		
21	Property Tax Factor (TBH-33, L24)	1.1081%		
22	Effective Property Tax Factor (L21 * L22)	0.00695505		
23	Combined Federal and State Tax and Property Tax Rate (L17 + L22)		37.9295%	
24	Required Operating Income (Schedule TBH-1, L5)	\$ 889,329		
25	Adjusted Test Year Operating Income (Loss) (Schedule TBH-18, L40)	\$ 512,191		
26	Required Increase in Operating Income (L24 - L25)		\$ 377,138	
27	Income Taxes on Recommended Revenue (Col. [D], L52)	\$ 454,896		
28	Income Taxes on Test Year Revenue (Col. [B], L52)	\$ 231,171		
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		\$ 223,726	
30	Recommended Revenue Requirement (Schedule TBH-1, L10)	\$ 5,232,327		
31	Uncollectible Rate (L10)	0.0000%		
32	Uncollectible Expense on Recommended Revenue (L24 * L25)	\$ -		
33	Adjusted Test Year Uncollectible Expense	\$0		
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		\$ -	
35	Property Tax with Recommended Revenue (TBH-33, L19)	\$ 155,730		
36	Property Tax on Test Year Revenue (TBH-33, L16)	\$148,997		
37	Increase in Property Tax Due to Increase in Revenue (TBH-33, L22)		\$ 6,733	
38	Total Required Increase in Revenue (L26 + L30 + L34 + L37)		\$ 607,597	
	<u>Calculation of Income Taxes:</u>			
		Test Year		STAFF Recommended
39	Revenue (Schedule TBH-18, Col. [C], L5 & Sch. TBH-1, Col. [B], L10)	\$4,624,730		\$5,232,327
40	Operating Expenses Excluding Income Taxes	3,881,368		3,888,100
41	Synchronized Interest (L47)	122,504		122,504
42	Arizona Taxable Income (L36 - L37 - L38)	\$ 620,859		\$ 1,221,723
43	Arizona State Income Tax Rate	4.9000%		4.9000%
44	Arizona Income Tax (L39 * L40)	\$ 30,422		\$ 59,864
45	Federal Taxable Income (L33 - L35)	\$ 590,437		\$ 1,161,858
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	7,500		7,500
47	Federal Tax on Second Income Bracket (\$50,001 - \$75,000) @ 25%	6,250		6,250
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	8,500		8,500
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	91,650		91,650
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	86,848		281,132
51	Total Federal Income Tax	\$ 200,748		\$ 395,032
52	Combined Federal and State Income Tax (L35 + L42)	\$ 231,171		\$ 454,896
53	Applicable Federal Income Tax Rate (Col. [D], L42 - Col. [B], L42) / (Col. [C], L36 - Col. [A], L36)			34.00%
	<u>Calculation of Interest Synchronization:</u>			
54	Rate Base (Schedule TBH-3, Col. [C], L17)	\$11,779,194		
55	Weighted Average Cost of Debt (Schedule TBH-1) COC	1.04%		
56	Synchronized Interest (L45 * L46)	\$ 122,504		

RATE BASE - ORIGINAL COST/FAIR VALUE					
LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	REF	[C] STAFF AS ADJUSTED
1	Plant in Service	\$37,612,450	(\$990,741)	1-6	\$36,621,709
2	Less: Accumulated Depreciation	14,375,372	(35,886)	8	14,339,486
3	Net Plant in Service	\$23,237,078	(\$954,855)		\$22,282,223
4	<u>LESS:</u>				
7	Net Contribution in Aid-of Construction (CIAC)	\$275,124	\$457,741	9-10	\$732,865
9	Advances in Aid of Construction (AIAC)	9,114,847	(519,226)	9	8,595,621
11	Customer Deposits	408,155	0		408,155
12	Customer Security Deposits	15,077	0		15,077
13	Deferred Income Tax Credits	381,189	505,413	11	886,602
15	Total Deductions	\$10,194,392	\$443,928		\$10,638,320
17	<u>ADD:</u>				
18	Unamortized Finance Charges	\$0	\$0		\$0
20	Deferred Tax Assets	1,855	0		1,855
22	Allowance for Cash Working Capital	160,647	(27,211)	12	133,436
24	Rounding	(1)	0		(1)
26	Total Additions	\$162,501	(\$27,211)		\$135,290
28	Original Cost Rate Base	\$13,205,187	(\$1,425,993)		\$11,779,194

REFERENCES:

Column [A]: Company Schedule B-1
Column [B]: Schedule TBH-4
Column [C]: Column [A] + Column [B]

			SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS						
LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Allocated Corporate Plant ADJ No. 1 Ref. Sch TBH-5	[C] Plant Reclassifications ADJ No. 2 Ref. Sch TBH-6	[D] Plant Adjustments ADJ No. 3 Ref. Sch TBH-7	[E] Unsupported Plant ADJ No. 4 Ref. Sch TBH-8	[F] PTY Plant Adjustment ADJ No. 5 Ref. Sch TBH-9	[G] INDOH Adjustment ADJ No. 6 Ref. Sch TBH-10
<u>PLANT IN SERVICE:</u>									
1	301	Organization Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	302	Franchise Costs	98,989	0	0	0	0	0	(4,077)
3	303	Land & Land Rights	688,011	0	0	0	0	0	0
4	304	Structures & Improvements	4,235,497	0	(43,287)	(4,445)	(164,173)	0	(201,221)
5	305	Collecting & Impounding Reservoirs	105,644	0	(58,831)	0	0	0	0
6	307	Wells & Springs	1,692,408	0	0	12,291	0	(291)	(10,031)
7	309	Raw Water Supply Mains	432,050	0	0	2,180	0	0	(21,504)
8	310	Power Generation Equipment	195,696	0	0	0	(561)	0	0
9	311	Electric Pumping Equipment	3,195,256	0	0	55,334	(3,739)	(255)	(108,234)
10	320	Water Treatment Equipment	117,674	0	0	1,206	0	(113)	(6,344)
11	320.1	Water Treatment Plants	0	0	0	0	0	0	0
12	320.2	Solutions & Feeders	0	0	0	0	0	0	0
13	320.3	Arsenic Remediation Plant	0	0	0	0	0	0	0
14	330	Distribution Reservoirs & Standpipes	3,195,343	0	102,118	0	0	0	(31,739)
15	330.1	Storage Tank	0	0	0	0	0	0	0
16	330.2	Pressure Tanks	0	0	0	0	0	0	0
17	331	Transmission & Distribution Mains	14,654,450	0	0	30,076	(43)	0	(80,403)
18	333	Services	2,173,490	0	0	52,357	0	(2,149)	(88,879)
19	334	Meters & Meter Installations	1,959,945	0	0	39,259	(100,149)	0	(64,087)
20	335	Hydrants	1,151,007	0	0	1,328	0	0	(11,891)
21	336	Backflow Prevention Devices	0	0	0	0	0	0	0
22	339	Other Plant & Misc. Equip.	189,235	0	0	0	0	0	(6,348)
23	340	Office Furniture & Fixtures	281,034	0	(37,996)	(2,137)	0	0	(1,463)
24	340.1	Computer & Software	166,002	0	37,996	1,775	0	0	(36,183)
25	341	Transportation Equipment	519,513	0	0	34,453	0	0	(16,234)
26	342	Store Equipment	0	0	0	0	0	0	0
27	343	Tools & Work Equipment	314,385	0	0	5,794	0	0	(31,622)
28	344	Laboratory Equipment	3,285	0	0	0	0	0	(221)
29	345	Power Operated Equipment	101,250	0	0	0	0	0	(5,162)
30	346	Communications Equipment	892,339	0	0	3,490	0	0	(24,380)
31	347	Miscellaneous Equipment	662,722	0	(442,442)	0	0	0	(8,140)
32	347.1	Miscellaneous Equipment - CNG Plant	0	0	442,442	8,140	0	0	(38,110)
33	348	Other Intangibles	155,378	0	0	0	0	0	(179)
34		Rounding	(2)	0	0	0	0	0	0
35		SUBTOTAL	37,180,601	\$0	\$0	241,102	(268,664)	(2,808)	(796,449)
<u>ALLOCATED CORPORATE PLANT:</u>									
38	903	Land & Land Rights	\$20,738	(15,852)	0	0	0	0	0
39	904	Structures & Improvements	225,059	(139,208)	0	0	0	0	0
40	940	Office Furniture & Fixtures	24,473	3,774	0	0	0	0	0
41	940.1	Computer & Software	161,580	23,547	0	0	0	0	0
42		Rounding	(1)	0	0	0	0	0	0
43		SUBTOTAL	\$431,849	\$(127,739)	\$0	\$0	\$0	\$0	\$0
44		Gross Utility Plant in Service	\$37,612,450	\$(127,739)	\$0	\$241,102	\$(268,664)	\$(2,808)	\$(796,449)
45		Less: Accumulated Depreciation	14,375,372	0	0	0	0	0	0
46		Net Utility Plant in Service (L45 - L46)	\$23,237,078	\$(127,739)	\$0	\$241,102	\$(268,664)	\$(2,808)	\$(796,449)
<u>DEDUCTIONS:</u>									
49		Contributions in Aid of Construction (CIAC)	\$579,988	\$0	\$0	\$0	\$0	\$0	\$0
50		Less: Accumulated Amortization	304,864	0	0	0	0	0	0
51		Net CIAC (L50 - L51)	\$275,124	\$0	\$0	\$0	\$0	\$0	\$0
52		Advances in Aid of Construction (AIAC)	9,114,847	0	0	0	0	0	0
53		Customer Meter Deposits	408,155	0	0	0	0	0	0
54		Customer Security Deposits	15,077	0	0	0	0	0	0
55		Deferred Income Tax Credits	381,189	0	0	0	0	0	0
56		Total Deductions	\$10,194,392	\$0	\$0	\$0	\$0	\$0	\$0
<u>ADDITIONS:</u>									
59		Unamortized Finance Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0
60		Prepayments	1,855	0	0	0	0	0	0
61		Allowance for Cash Working Capital	160,647	0	0	0	0	0	0
62		Intentional Left Blank	0	0	0	0	0	0	0
63		Total Additions	\$162,502	\$0	\$0	\$0	\$0	\$0	\$0
64		Rounding	(\$1)	0	0	0	0	0	0
65		ORIGINAL COST RATE BASE	\$13,205,187	\$(127,739)	\$0	\$241,102	\$(268,664)	\$(2,808)	\$(796,449)

			SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS							
LINE NO.	ACCT. NO.	DESCRIPTION	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
			Retirement Adjustment ADJ No. 7	Accumulated Depreciation ADJ No. 8	AIAC to CIAC Conversion ADJ No. 9	CIAC & Amortiz. Of CIAC ADJ No. 10	ADIT ADJ No. 11	Working Capital ADJ No. 12	Intentionally Left Blank ADJ No. 13	STAFF ADJUSTED
			Ref: Sch TBH-11	Ref: Sch TBH-12	Ref: Sch TBH-13	Ref: Sch TBH-14	Ref: Sch TBH-15	Ref: Sch TBH-16	Ref: Sch TBH-17	
		<u>PLANT IN SERVICE:</u>								
1	301	Organization Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2	302	Franchise Costs	0	0	0	0	0	0	0	94,912
3	303	Land & Land Rights	0	0	0	0	0	0	0	688,011
4	304	Structures & Improvements	0	0	0	0	0	0	0	3,822,372
5	305	Collecting & Impounding Reservoirs	0	0	0	0	0	0	0	46,813
6	307	Wells & Springs	0	0	0	0	0	0	0	1,694,377
7	309	Raw Water Supply Mains	0	0	0	0	0	0	0	412,727
8	310	Power Generation Equipment	0	0	0	0	0	0	0	195,135
9	311	Electric Pumping Equipment	(36,183)	0	0	0	0	0	0	3,102,180
10	320	Water Treatment Equipment	0	0	0	0	0	0	0	112,423
11	320.1	Water Treatment Plants	0	0	0	0	0	0	0	0
12	320.2	Solutions & Feeders	0	0	0	0	0	0	0	0
13	320.3	Arsenic Remediation Plant	0	0	0	0	0	0	0	0
14	330	Distribution Reservoirs & Standpipes	0	0	0	0	0	0	0	3,265,722
15	330.1	Storage Tank	0	0	0	0	0	0	0	0
16	330.2	Pressure Tanks	0	0	0	0	0	0	0	0
17	331	Transmission & Distribution Mains	0	0	0	0	0	0	0	14,604,081
18	333	Services	0	0	0	0	0	0	0	2,134,820
19	334	Meters & Meter Installations	0	0	0	0	0	0	0	1,834,968
20	335	Hydrants	0	0	0	0	0	0	0	1,140,444
21	336	Backflow Prevention Devices	0	0	0	0	0	0	0	0
22	339	Other Plant & Misc. Equip.	0	0	0	0	0	0	0	182,887
23	340	Office Furniture & Fixtures	0	0	0	0	0	0	0	239,438
24	340.1	Computer & Software	0	0	0	0	0	0	0	169,591
25	341	Transportation Equipment	0	0	0	0	0	0	0	537,732
26	342	Store Equipment	0	0	0	0	0	0	0	0
27	343	Tools & Work Equipment	0	0	0	0	0	0	0	288,557
28	344	Laboratory Equipment	0	0	0	0	0	0	0	3,064
29	345	Power Operated Equipment	0	0	0	0	0	0	0	96,088
30	346	Communications Equipment	0	0	0	0	0	0	0	871,449
31	347	Miscellaneous Equipment	0	0	0	0	0	0	0	212,140
32	347.1	Miscellaneous Equipment - CNG Plant	0	0	0	0	0	0	0	412,472
33	348	Other Intangibles	0	0	0	0	0	0	0	155,199
34		Rounding	0	0	0	0	0	0	0	(2)
35		SUBTOTAL	(\$36,183)	\$0	\$0	\$0	\$0	\$0	\$0	36,317,600
36										
37		<u>ALLOCATED CORPORATE PLANT:</u>								
38	903	Land & Land Rights	0	0	0	0	0	0	0	4,886
39	904	Structures & Improvements	0	0	0	0	0	0	0	85,851
40	940	Office Furniture & Fixtures	0	0	0	0	0	0	0	28,247
41	940.1	Computer & Software	0	0	0	0	0	0	0	185,127
42		Rounding	0	0	0	0	0	0	0	(1)
43		SUBTOTAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$ 304,110
44										
45		Gross Utility Plant in Service	(\$36,183)	\$0	\$0	\$0	\$0	\$0	\$0	\$36,621,709
46		Less: Accumulated Depreciation	0	(35,886)	0	0	0	0	0	14,339,486
47		Net Utility Plant in Service (L45 - L46)	(\$36,183)	\$35,886	\$0	\$0	\$0	\$0	\$0	\$22,282,223
48										
49		<u>DEDUCTIONS:</u>								
50		Contributions in Aid of Construction (CIAC)	\$0	\$0	\$519,226	(\$17,772)	\$0	\$0	\$0	\$1,081,442
51		Less: Accumulated Amortization	0	0	0	43,714	0	0	0	348,578
52		Net CIAC (L50 - L51)	\$0	\$0	\$519,226	(\$61,486)	\$0	\$0	\$0	\$732,865
53		Advances in Aid of Construction (AIAC)	0	0	(519,226)	0	0	0	0	8,595,621
54		Customer Meter Deposits	0	0	0	0	0	0	0	408,155
55		Customer Security Deposits	0	0	0	0	0	0	0	15,077
56		Deferred Income Tax Credits	0	0	0	0	505,413	0	0	886,602
57		Total Deductions	\$0	\$0	\$0	(\$61,486)	\$505,413	\$0	\$0	\$10,638,320
58										
59		<u>ADDITIONS:</u>								
60		Unamortized Finance Charges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
61		Prepayments	0	0	0	0	0	0	0	1,855
62		Allowance for Cash Working Capital	0	0	0	0	0	(27,211)	0	133,436
63		Intentional Left Blank	0	0	0	0	0	0	0	0
64		Total Additions	\$0	\$0	\$0	\$0	\$0	(\$27,211)	\$0	\$135,291
65										
66		Rounding	0	0	0	0	0	0	0	(1)
67										
68		ORIGINAL COST RATE BASE	(\$36,183)	\$35,886	\$0	\$61,486	(\$505,413)	(\$27,211)	\$0	\$11,779,194

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Schedule TBH-5

RATE BASE ADJUSTMENT NO. 1 - Allocated Corporate Plant					
LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	903	Land and Land Rights	\$20,738	(\$15,852)	\$4,886
2	904	Structures and Improvements	225,059	(139,208)	85,851
3	940	Office Furniture and Equipment	24,473	3,774	28,247
4	940.1	Computers and Software	161,580	23,547	185,127
5		Total	431,850	(127,739)	304,111

REFERENCES:

Column [A]: Company Schedule B-1

Column [B]: Column [C] less Column [A]

Column [C]: Company Workpapers, Company's response to Staff's DR TBH 5.9, TBH 7.4, TBH 7.5, TBH 2.43, Schedule B-2, Pg 3.3

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Schedule TBH-6

RATE BASE ADJUSTMENT NO. 2 - Reclassification

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	304	Structures & Improvements	\$0	(43,287)	(\$43,287)
2	305	Collecting & Impounding Reservoirs	0	(58,831)	(58,831)
3	307	Wells & Springs	0	(46,686)	(46,686)
4	309	Raw Water Supply Mains	0	0	0
5	311	Electric Pumping Equipment	0	46,686	46,686
6	330	Distribution Reservoirs & Standpipes	0	102,118	102,118
7	334	Meters & Meter Installations	0	0	0
8	340	Office Furniture and Equipment	0	(37,996)	(37,996)
9	340.1	Computers and Software	0	37,996	37,996
10	341	Transportation Equipment	0	0	0
11	347	Miscellaneous Equipment	0	(442,442)	(442,442)
12	347.1	Miscellaneous Equipment - CNG Plant	0	442,442	442,442
13		Total	\$0	\$0	\$0

REFERENCES:

Column [A]:

Column [B]: Company's response to Staff's DR TBH 2.19 BV roll forward, TBH 4.16, RUCO 2.10 PTY Plant and Testimony

Column [C]: Column [A] + Column [B]

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Schedule TBH-7

RATE BASE ADJUSTMENT NO. 3 - Plant Additions

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	304	Structures & Improvements	\$0	(\$4,445)	(\$4,445)
2	307	Wells & Springs	0	12,291	12,291
3	309	Raw Water Supply Mains	0	2,180	2,180
4	311	Electric Pumping Equipment	0	55,334	55,334
5	320	Water Treatment Equipment	0	1,206	1,206
6	331	Transmission & Distribution Mains	0	30,076	30,076
7	333	Services	0	52,357	52,357
8	334	Meters & Meter Installations	0	39,259	39,259
9	335	Hydrants	0	1,328	1,328
10	340	Office Furniture and Equipment	0	(2,137)	(2,137)
11	340.1	Computers and Software	0	1,775	1,775
12	341	Transportation Equipment	0	34,453	34,453
13	343	Tools & Work Equipment	0	5,794	5,794
14	346	Communications Equipment	0	3,490	3,490
15	347.1	Miscellaneous Equipment - CNG Plant	0	8,140	8,140
16					
17		Total	\$0	\$241,102	\$241,102

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.19, TBH 4.16, PTY RUCO 2.10 and Testimony TBH

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Schedule TBH-8

RATE BASE ADJUSTMENT NO. 4 - Unsupported Plant					
LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	304	Structures & Improvements	\$0	(\$164,173)	(\$164,173)
2	310	Power Generation Equipment	0	(561)	(561)
3	311	Electric Pumping Equipment	0	(3,739)	(3,739)
4	331	Transmission	0	(43)	(43)
5	334	Meters & Meter Installations	0	(100,149)	(100,149)
6		Totals	\$0	(\$268,664)	(\$268,664)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.19, TBH 4.16, PTY RUCO 2.10 and Testimony TBH

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Schedule TBH-9

RATE BASE ADJUSTMENT NO. 5 - PTY Removal

			[A]	[B]	[C]
LINE NO.	ACCT. NO.	DESCRIPTION	COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	307	Wells & Springs	\$0	(291)	(291)
2	311	Electric Pumping Equipment	0	(255)	(255)
3	320	Water Treatment Equipment	0	(113)	(113)
4	333	Services	0	(2,149)	(2,149)
5		Totals	\$0	(\$2,808)	(\$2,808)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.19, TBH 4.16, PTY RUCO 2.10 and Testimony TBH

RATE BASE ADJUSTMENT NO. 6 - INDOH Removal

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	302	Franchise Costs	\$0	(\$4,077)	(\$4,077)
2	304	Structures & Improvements	0	(201,221)	(201,221)
3	307	Wells & Springs	0	(10,031)	(10,031)
4	309	Raw Water Supply Mains	0	(21,504)	(21,504)
5	311	Electric Pumping Equipment	0	(108,234)	(108,234)
6	320	Water Treatment Equipment	0	(6,344)	(6,344)
7	330	Distribution Reservoirs & Standpipes	0	(31,739)	(31,739)
8	331	Transmission & Distribution Mains	0	(80,403)	(80,403)
9	333	Services	0	(88,879)	(88,879)
10	334	Meters & Meter Installations	0	(64,087)	(64,087)
11	335	Hydrants	0	(11,891)	(11,891)
12	339	Other Plant & Misc. Equip.	0	(6,348)	(6,348)
13	340	Office Furniture & Fixtures	0	(1,463)	(1,463)
14	340.1	Computer & Software	0	(36,183)	(36,183)
15	341	Transportation Equipment	0	(16,234)	(16,234)
16	343	Tools & Work Equipment	0	(31,622)	(31,622)
17	344	Laboratory Equipment	0	(221)	(221)
18	345	Power Operated Equipment	0	(5,162)	(5,162)
19	346	Communications Equipment	0	(24,380)	(24,380)
20	347	Miscellaneous Equipment	0	(8,140)	(8,140)
21	347.1	Miscellaneous Equipment - CNG Plant	0	(38,110)	(38,110)
22	348	Other Intangibles	0	(179)	(179)
23					
24		Total	\$0	(\$796,449)	(\$796,449)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 4.16, TBH 5.15 and TBH 7.16 and Testimony TBH

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Schedule TBH-11

RATE BASE ADJUSTMENT NO. 7 - Retirement Adjustment

			[A]	[B]	[C]
LINE NO.	ACCT. NO.	DESCRIPTION	COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	311	Pumping Equipment	\$0	(\$36,183)	(\$36,183)
2		Total	\$0	(\$36,183)	(\$36,183)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.19, TBH 4.16, TBH 4.27 and Testimony TBH

Liberty Utilities (Bella Vista Water) Corp.
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Schedule TBH-12

RATE BASE ADJUSTMENT NO. 8 - ACCUMULATED DEPRECIATION

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1		Accumulated Depreciation	\$14,375,372	(\$35,886)	\$14,339,486
2		Total	\$14,375,372	(\$35,886)	\$14,339,486

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Workpapers and Responses to DR responses.

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 9 - AIAC CONVERSION TO CIAC

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF ADJUSTED
1	AIAC	\$9,114,847	(\$519,226)	\$8,595,621
2	CIAC	579,988	\$519,226	1,099,214
3				
4	Total	\$9,694,835	\$0	\$9,694,835
5				
6				
7	AIAC		2014	AIAC
8	Contract		Ending	Transferred
9	Date	Expiration	Balance	to CIAC
10	12/20/96	12/18/2006	Wildhorse Well Site	\$234,101
11	12/20/96	12/18/2006	Wild Horse Addtl Source	40,000
12	12/12/96	12/10/2006	City of Sierra Vista - Ball Field	34,302
13	02/17/98	2/15/2008	City of Sierra Vista - Piaz Complex	33,480
14	03/12/98	3/9/2008	City of Sierra Vista - Hydrant Additions	50,000
15	06/21/99	6/18/2009	County of Cochise	68,900
16	01/11/01	1/9/2011	Campus Drive Busn Park (Lots 1-14)	58,443
17				
18	Total		\$519,226	\$519,226

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Response to TBH 2.25

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 10 - Contributions in Aid of Construction ("CIAC")

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF ADJUSTED
1	CIAC	\$579,988	\$0	\$579,988
2	CIAC Correction from DR 2.24	0	(17,772)	(17,772)
3	AIAC Converted to CIAC	0	\$519,226	\$519,226
4	Total CIAC	\$579,988	\$501,454	\$1,081,442
5				
6	Amortization of CIAC	\$304,864	\$0	\$304,864
7	Amortization of CIAC Correction from DR 2.24	0	34,832	34,832
8	Amortization of AIAC Converted to CIAC	0	8,882	8,882
9	Total Amortization of CIAC	\$304,864	\$43,714	\$348,578
10				
11	Net CIAC	\$275,124	\$457,741	\$732,865
12				
13				
14		CIAC converted from AIAC	\$519,226	
15		Half-year Convention	0.50	
16			\$259,613	
17		Amortization Rate	3.42%	
18			\$8,882	
19				

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Response to TBH 2.25, TBH 2.24

Column [C]: Column [A] + Column [B]

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Schedule TBH-15

RATE BASE ADJUSTMENT NO. 11 - Accumulated Deferred Income Taxes ("ADIT")

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	ADIT	\$381,189	\$505,413	\$886,602

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Response DR, Company Schedule B-2 ADJ 5 pages 7.0-7.1

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 12 - Cash Working Capital							
Line No.	Description	Proforma Test Year Amount ¹	Revenue Lag (Lead) Days	Expense Lag (Lead) Days	Net Lag (Lead) Days Col. C - Col. D	Lead/Lag Factor Col. E/365	Cash Working Capital Required Col. B * Col. F
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	OPERATING EXPENSES						
2	Salaries and Wages	\$0	45.63	\$0.00	45.63	0.12501247	\$0
3	Purchased Water	3,021	45.63	24.34	21.29	0.05832754	176
4	Purchased Power	534,813	45.63	32.09	13.54	0.03709467	19,839
5	Chemicals	16,800	45.63	(24.00)	69.63	0.19076590	3,205
6	Fuel for Power Production	0	45.63	0.00	45.63	0.12501247	0
7	Repairs and Maintenance	0	45.63	16.11	29.52	0.08087549	0
8	Office Supplies and Expense	39,640	45.63	39.26	6.37	0.01745083	692
9	Outside Services	0	45.63	0.00	45.63	0.12501247	0
10	Contractual Services - Professional	931,039	45.63	19.92	25.71	0.07043713	65,580
11	Contractual Services - Testing	50,350	45.63	26.06	19.57	0.05361521	2,700
12	Contractual Services - Other	660,334	45.63	22.70	22.93	0.06282069	41,483
13	Water Testing	0	45.63	0.00	45.63	0.12501247	0
14	Rents	6,162	45.63	(6.12)	51.75	0.14177960	874
15	Transportation	105,295	45.63	25.37	20.26	0.05550563	5,844
16	Insurance	45,568	45.63	0	45.63	0.12501247	5,697
17	Materials and Supplies	63,090	45.63	16.11	29.52	0.08087549	5,102
18	Miscellaneous	140,167	45.63	(8.28)	53.91	0.14769741	20,702
19	Interest Expense	91,430	90.25	0.00	90.25	0.24726027	22,607
20							
21							
22							
23	TAXES						
24	General Taxes-Property ¹	155,730	45.63	213.96	(168.33)	(0.46117474)	\$ (71,819)
25	General Taxes-Other	0	45.63	0	45.63	0.12501247	0
26	Income Tax ¹	454,896	45.63	37.00	8.63	0.02364261	10,755
27							
28	OTHER						
29	Regulatory Commission Expense	0	45.63	(136.54)	182.17	0.49909923	0
30							
31							
32	TOTAL	\$ 3,298,335	WORKING CASH REQUIREMENT				\$ 133,436
33							
			Per Co	Per Staff	Adjustment		
	Cash Working Capital Requirement		\$ 160,647	\$ 133,436	\$ (27,211)		
	Total Working Capital Allowance		160,647	133,436	(27,211)		

REFERENCES:

Column [A]: TBH -19, Application Schedule D2 pg1
Column [B]: Company's Schedule, Financing Application for Interest
Column [C]: Company's Schedule
Column [D]: Company's Schedule
Column [E]: Days Col. C - Col. D
Column [F]: Col. E/365
Column [G]: Col. B * Col. F

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Schedule TBH-17

RATE BASE ADJUSTMENT NO. 13 - Intentionally Left Blank

LINE NO.	ACCT. NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1		xxxxxxx	\$0	\$0	\$0
2		Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, xxx

Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	ADJ NO.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
1		REVENUES:						
2	461	Metered Water Sales	\$4,530,252	\$0		\$4,530,252	\$607,597	\$5,137,849
3	460	Water Sales - Unmetered	0	0		0	0	0
4	474	Other Operating Revenue	94,478	0		94,478	0	94,478
5		Total Operating Revenues	\$4,624,730	\$0		\$4,624,730	\$607,597	\$5,232,327
6								
7		OPERATING EXPENSES:						
8	601	Salaries & Wages	\$0	\$0		\$0	\$0	\$0
9	610	Purchased Water	3,021	0		3,021	0	3,021
10	615	Purchased Power	534,813	0		534,813	0	534,813
11	618	Chemicals	16,800	0		16,800	0	16,800
12	620	Repairs & Maintenance	0	0		0	0	0
13	621	Office Supplies & Expense	39,640	0		39,640	0	39,640
14	630	Outside services	0	0		0	0	0
15	634/632	Contractual Services - Professional	1,209,810	(278,771)	1-8	931,039	0	931,039
16	635	Contractual Services - Testing	89,695	(39,345)	9-10	50,350	0	50,350
17	636	Contractual Services - Other	673,384	(13,050)	3 - 4	660,334	0	660,334
18	635	Water Testing	0	0		0	0	0
19	641	Rents	6,162	0		6,162	0	6,162
20	650	Transportation Expense	105,295	0		105,295	0	105,295
21	657	Insurance	45,568	0		45,568	0	45,568
22	666	Regulatory Commission Expense	52,111	0		52,111	0	52,111
23	620	Materials and Supplies	63,090	0		63,090	0	63,090
24	675	Miscellaneous Expense	152,340	(12,173)	9	140,167	0	140,167
25	403	Depreciation Expense	1,175,263	(91,282)	13	1,083,981	0	1,083,981
26	408	Taxes Other than Income	0	0		0	0	0
27	408.11	Property Taxes	148,997	(0)	14	148,997	6,733	155,730
28	409	Income Tax	55,166	176,005	15	231,171	223,726	454,896
29		Rounding	1			1	(1)	0
30		Total Operating Expenses	\$4,371,156	(\$258,617)		\$4,112,539	\$230,457	\$4,342,997
31								
32		Operating Income (Loss)	\$253,574	\$258,617		\$512,191	\$377,139	\$889,330

REFERENCES:

Column [A]: Company Schedule C-1 (TAB IS~ADJ)
Column [B]: Schedule TBH-19
Column [C]: Column [A] + Column [B]
Column [D]: Schedules TBH-25 and TBH-2
Column [E]: Column [C] + Column [D]

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR										
LINE NO.	ACCT. NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
			COMPANY AS FILED	Corporate Allocations - LUC, APUC, LUC-LABS ADJ No. 1 Ref. Sch TBH-20	Contractual Services - Professional Labor LU 8020 ADJ No. 2 Ref. Sch TBH-21	Contractual Services - Reclassification ADJ No. 3 Ref. Sch TBH-22	Corporate Cost Adjustment - Labor Increase ADJ No. 4 Ref. Sch TBH-23	Intentionally Left Blank ADJ No. 5 Ref. Sch TBH-24	Contractual Services - Professional HRIS Capital Labor ADJ No. 6 Ref. Sch TBH-25	Contractual Services - Professional Incentive Pay ADJ No. 7 Ref. Sch TBH-26
1		REVENUES:								
2	461	Metered Water Sales	\$4,530,252	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	460	Water Sales - Unmetered	0	0	0	0	0	0	0	0
4	474	Other Operating Revenue	94,478	0	0	0	0	0	0	0
5		Total Operating Revenues	\$4,624,730	\$0	\$0	\$0	\$0	\$0	\$0	\$0
6										
7		OPERATING EXPENSES:								
8	601	Salaries & Wages	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	610	Purchased Water	3,021	0	0	0	0	0	0	0
10	615	Purchased Power	534,813	0	0	0	0	0	0	0
11	618	Chemicals	16,800	0	0	0	0	0	0	0
12	620	Repairs & Maintenance	0	0	0	0	0	0	0	0
13	621	Office Supplies & Expense	39,640	0	0	0	0	0	0	0
14	630	Outside services	0	0	0	0	0	0	0	0
15	634/632	Contractual Services - Professional	1,209,810	(119,160)	(136,916)	(127,755)	(32,247)	0	(6,146)	(34,867)
16	635	Contractual Services - Testing	89,695	0	0	0	0	0	0	0
17	636	Contractual Services - Other	673,384	0	0	127,755	(13,050)	0	0	0
18	635	Water Testing	0	0	0	0	0	0	0	0
19	641	Rents	6,162	0	0	0	0	0	0	0
20	650	Transportation Expense	105,295	0	0	0	0	0	0	0
21	657	Insurance	45,568	0	0	0	0	0	0	0
22	666	Regulatory Commission Expense	52,111	0	0	0	0	0	0	0
23	620	Materials and Supplies	63,090	0	0	0	0	0	0	0
24	675	Miscellaneous Expense	152,340	0	0	0	0	0	0	0
25	403	Depreciation Expense	1,175,263	0	0	0	0	0	0	0
26	408	Taxes Other than Income	0	0	0	0	0	0	0	0
27	408.11	Property Taxes	148,997	0	0	0	0	0	0	0
28	409	Income Tax	55,166	0	0	0	0	0	0	0
29		Rounding	1	0	0	0	0	0	0	0
29		Total Operating Expenses	\$4,371,156	(\$119,160)	(\$136,916)	\$0	(\$45,297)	\$0	(\$6,146)	(\$34,867)
30										
31		Operating Income (Loss)	\$253,574	\$119,160	\$136,916	\$0	\$45,297	\$0	\$6,146	\$34,867

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR											
			III	II	IS	IL	IM	IN	IO	IP	IQ
		Contractual Service - INDOH		Miscellaneous Expense Redfss	Water Testing	Intentionally Left Blank	Intentionally Left Blank	Dept. Exp.	Prop. Tax	Income Tax	
LINE NO.	ACCT. NO.	DESCRIPTION	ADJ No. 8	ADJ No. 9	ADJ No. 10	ADJ No. 11	ADJ No. 12	ADJ No. 13	ADJ No. 14	ADJ No. 15	STAFF
		Ref. Sch TBH-27	Ref. Sch TBH-28	Ref. Sch TBH-29	Ref. Sch TBH-30	Ref. Sch TBH-31	Ref. Sch TBH-32	Ref. Sch TBH-33	Ref. Sch TBH-34		ADJUSTED
1	REVENUES:										
2	461 Metered Water Sales	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,530,252
3	460 Water Sales - Unmetered	0	0	0	0	0	0	0	0	0	\$0
4	474 Other Operating Revenue	0	0	0	0	0	0	0	0	0	\$94,478
5	Total Operating Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,624,730
6											
7	OPERATING EXPENSES:										
8	601 Salaries & Wages	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	610 Purchased Water	0	0	0	0	0	0	0	0	0	3,021
10	615 Purchased Power	0	0	0	0	0	0	0	0	0	534,813
11	618 Chemicals	0	0	0	0	0	0	0	0	0	16,800
12	620 Repairs & Maintenance	0	0	0	0	0	0	0	0	0	0
13	621 Office Supplies & Expense	0	0	0	0	0	0	0	0	0	39,640
14	630 Outside services	0	0	0	0	0	0	0	0	0	0
15	634/632 Contractual Services - Professional	50,566	0	0	0	0	0	0	0	0	931,039
16	635 Contractual Services - Testing	0	12,173	(51,518)	0	0	0	0	0	0	50,350
17	636 Contractual Services - Other	0	0	0	0	0	0	0	0	0	660,334
18	635 Water Testing	0	0	0	0	0	0	0	0	0	0
19	641 Rents	0	0	0	0	0	0	0	0	0	6,162
20	650 Transportation Expense	0	0	0	0	0	0	0	0	0	105,295
21	657 Insurance	0	0	0	0	0	0	0	0	0	45,568
22	660 Regulatory Commission Expense	0	0	0	0	0	0	0	0	0	52,111
23	620 Materials and Supplies	0	0	0	0	0	0	0	0	0	63,090
24	675 Miscellaneous Expense	0	(12,173)	0	0	0	0	0	0	0	140,167
25	403 Depreciation Expense	0	0	0	0	0	(91,282)	0	0	0	1,083,981
26	408 Taxes Other than Income	0	0	0	0	0	0	0	0	0	0
27	408.11 Property Taxes	0	0	0	0	0	0	0	(0)	0	148,997
28	409 Income Tax	0	0	0	0	0	0	0	0	176,005	231,171
29	Rounding	0	0	0	0	0	0	0	0	0	1
29	Total Operating Expenses	\$50,566	\$0	(\$51,518)	\$0	\$0	(\$91,282)	(\$0)	\$0	\$176,005	\$4,112,539
30											
31	Operating Income (Loss)	(\$50,566)	\$0	\$51,518	\$0	\$0	\$91,282	\$0	\$0	(\$176,005)	\$512,191

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Schedule TBH-20

OPERATING INCOME ADJUSTMENT NO. 1 - Corporate Allocations - LUC, APUC, LUC-LABS

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Service - Professional APUC, LUC, LABS	\$188,758	(\$119,160)	\$69,598
2	(Labor and Non-Labor Allocations) TBH 5.1a	0		0
3	Total	\$188,758	(\$119,160)	\$69,598

REFERENCES:

Column [A]: Company Schedule C-2, Company's Responses to DR's TBH 2.7, TBH 4.2, TBH 5.1

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH

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Schedule TBH-21

OPERATING INCOME ADJUSTMENT NO. 2 - Contractual Services - Professional LU 8020

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional	\$0	(\$136,916)	(\$136,916)
2				
3	Total Revenues	\$0	(\$136,916)	(\$136,916)

REFERENCES:

Column [A]:

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 2.7

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Schedule TBH-22

OPERATING INCOME ADJUSTMENT NO. 3 - Corporate Cost Labor Reclassification				
LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional	\$0	(\$127,755)	(\$127,755)
2	Contractual Services - Other	0	127,755	127,755
3	Total Revenues	\$0	\$0	\$0

REFERENCES:

Column [A]:

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 5.1, TBH 2.28 and TBH 2.27

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Schedule TBH-23

OPERATING INCOME ADJUSTMENT NO. 4 - Corporate Cost Adjustment - Labor Increase

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Contractual Services - Professional	\$45,496	(\$32,247)	\$13,249
2	Contractual Services - Other	35,364	(13,050)	22,314
3	Total	\$80,860	(\$45,297)	\$35,563

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 5.1 and TBH 2.27

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Schedule TBH-24

OPERATING INCOME ADJUSTMENT NO. 5 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	xxxxxx	\$0	\$0	\$0
2				
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers
Column [B]: Testimony TBH
Column [C]: Column [A] + Column [B]

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Schedule TBH-25

OPERATING INCOME ADJUSTMENT NO. 6 - Corporate Cost Adjustment - HRIS Capital Labor

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional included in HRIS Corporate Plant	\$0	(\$6,146)	(\$6,146)
	Total	\$0	(\$6,146)	(\$6,146)

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's response to TBH 5.9, TBH 7.4 and 7.5

Column [C]: Column [A] + Column [B]

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Schedule TBH-26

OPERATING INCOME ADJUSTMENT NO. 7 - Incentive Pay

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Contractual Services - Professional Services	\$0	(\$34,867)	(\$34,867)
2		0	0	0
3	Total	\$0	(\$34,867)	(\$34,867)

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's response to RUCO 2.04 and TBH 2.34a

Column [C]: Column [A] + Column [B]

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Schedule TBH-27

OPERATING INCOME ADJUSTMENT NO. 8 - Contractual Service - Professional - INDOH				
LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional Services	\$0	\$50,566	\$50,566
2		0	0	0
3	Total	0	50,566	50,566

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's supplemental response to TBH 2.7

Column [C]: Column [A] + Column [B]

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Schedule TBH-28

OPERATING INCOME ADJUSTMENT NO. 9 - Miscellaneous Expenses Reclass

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Miscellaneous Expenses	\$152,340	(\$12,173)	\$140,167
2	Contractual Services	89,695	12,173	101,868
3	Total	\$242,035	\$0	\$242,035

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Testimony TBH, Workpapers

Column [C]: Column [A] + Column [B]

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Schedule TBH-29

OPERATING INCOME ADJUSTMENT NO. 10 - Contractual Services - Testing

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Testing (Adjusted)	\$101,868	(\$51,518)	\$50,350
2				
3	Total	\$101,868	(\$51,518)	\$50,350

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Testimony TBH, Staff's Engineering Report and Testimony

Column [C]: Column [A] + Column [B]

Liberty Utilities (Bella Vista Water) Corp.
Docket No. W-02465A-15-0367
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Schedule TBH-30

OPERATING INCOME ADJUSTMENT NO. 11 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	xxxxxxx	\$0	\$0	\$0
2				
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B]

Liberty Utilities (Bella Vista Water) Corp.
Docket No. W-02465A-15-0367
Test Year December 31, 2014

Schedule TBH-31

OPERATING INCOME ADJUSTMENT NO. 12 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	xxxxxxx	\$0	\$0	\$0
2				
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 13 - DEPRECIATION EXPENSE

Line No.	ACCT NO.	DESCRIPTION	[A] GROSS UTILITY PLANT IN SERVICE	[B] FULLY/NON DEPRECIABLE	[C] DEPRECIABLE PLANT	[D] DEPREC. RATE	[E] EXPENSE
Plant In Service							
1	301	Organization Costs	\$0	\$0	\$0	0.00%	\$0
2	302	Franchise Costs	94,912	94,912	(0)	0.00%	0
3	303	Land & Land Rights	688,011	688,011	0	0.00%	0
4	304	Structures & Improvements	3,822,372	0	3,822,372	3.33%	127,400
5	305	Collecting & Impounding Reservoirs	46,813	0	46,813	2.50%	1,170
6	307	Wells & Springs	1,694,377	0	1,694,377	3.33%	56,474
7	309	Raw Water Supply Mains	412,727	0	412,727	2.00%	8,255
8	310	Power Generation Equipment	195,135	0	195,135	5.00%	9,757
9	311	Electric Pumping Equipment	3,102,180	2,080,541	1,021,639	12.50%	127,705
10	320	Water Treatment Equipment	112,423	0	112,423	3.33%	3,747
11	320.1	Water Treatment Plants	0	0	0	3.33%	0
12	320.2	Solutions & Feeders	0	0	0	20.00%	0
13	330	Distribution Reservoirs & Standpipes	3,265,722	0	3,265,722	2.22%	72,571
14	330.1	Storage Tank	0	0	0	2.22%	0
15	330.2	Pressure Tanks	0	0	0	5.00%	0
16	331	Transmission & Distribution Mains	14,604,081	0	14,604,081	2.00%	292,082
17	333	Services	2,134,820	0	2,134,820	3.33%	71,160
18	334	Meters & Meter Installations	1,834,968	1,163,804	671,164	8.33%	55,930
19	335	Hydrants	1,140,444	0	1,140,444	2.00%	22,809
20	336	Backflow Prevention Devices	0	0	0	6.67%	0
21	339	Other Plant & Misc. Equip.	182,887	0	182,887	6.67%	12,199
22	340	Office Furniture & Fixtures	239,438	144,107	95,331	6.67%	6,359
23	340.1	Computer & Software	169,591	159,658	9,933	20.00%	1,987
24	341	Transportation Equipment	537,732	190,940	346,792	20.00%	69,358
25	342	Store Equipment	0	0	0	4.00%	0
26	343	Tools & Work Equipment	288,557	107,417	181,140	5.00%	9,057
27	344	Laboratory Equipment	3,064	0	3,064	10.00%	306
28	345	Power Operated Equipment	96,088	0	96,088	5.00%	4,804
29	346	Communications Equipment	871,449	0	871,449	10.00%	87,145
30	347	Miscellaneous Equipment	212,140	101,418	110,722	10.00%	11,072
31	347.1	Miscellaneous Equipment - CNG Plant	412,472	0	412,472	3.33%	13,748
32	348	Other Intangibles	155,199	0	155,199	10.00%	15,520
		Subtotal General	\$36,317,602	\$4,730,808	\$31,586,794		\$ 1,080,613
Corporate Plant							
33	903	Land & Land Rights	4,886	4,886	0	0.00%	0
34	904	Structures & Improvements	85,851	0	85,851	3.33%	2,861
35	940	Office Furniture & Fixtures	28,247	0	28,247	6.67%	1,884
36	940.1	Computer & Software	185,127	7,030	178,096	20.00%	35,619
37		Subtotal Corporate	\$304,111	\$11,916	\$292,195		\$40,365
38							
39		Total	\$36,621,712	\$4,742,724	\$31,878,989		\$1,120,978
40							
41		Contribution(s) in Aid of Construction (Gross)	\$1,081,442				
42		Less: Non Amortizable Contribution(s)	0				
43		Fully Amortized Contribution(s)	0				
44		Amortizable Contribution(s)	\$1,081,442				
45		Times: Staff Proposed Amortization Rate	3.421%				
46		Amortization of CIAC	36,997				\$36,997
47		Less: Amortization of Contributions					
48							
49		Staff Recommended Depreciation Expense					\$1,083,981
50		Company Proposed Depreciation Expense					1,175,263
51		Increase/(Decrease) to Depreciation Expense					(\$91,282)

REFERENCES:

Column [A]: Schedule TBH-4
Column [B]: From Column [A]
Column [C]: Column [A] - Column [B]
Column [D]: Engineering Staff Report
Column [E]: Column [C] x Column [D]

Liberty Utilities (Bella Vista Water) Corp.
Docket No. W-02465A-15-0367
Test Year December 31, 2014

Schedule TBH-33

OPERATING INCOME ADJUSTMENT NO. 14 - PROPERTY TAXES

LINE NO.	DESCRIPTION	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$4,624,730	\$4,624,730
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	\$9,249,460	\$9,249,460
4	Staff Recommended Revenue	4,624,730	5,232,327
5	Subtotal (Line 4 + Line 5)	\$13,874,190	\$14,481,787
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$4,624,730	\$4,827,262
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$9,249,460	\$9,654,524
10	Plus: 10% of CWIP	0	0
11	Less: Net Book Value of Licensed Vehicles	285,294	285,294
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$8,964,166	\$9,369,230
13	Assessment Ratio	18.00%	18.00%
14	Assessment Value (Line 12 * Line 13)	\$1,613,550	\$1,686,461
15	Composite Property Tax Rate - Obtained from ADOR	9.23410%	9.23410%
16	Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	\$148,997	
17	Company Proposed Property Tax	148,997	
18	Staff Test Year Adjustment (Line 16 - Line 17)	(\$0)	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$155,730
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		148,997
21	Increase in Property Tax Due to Increase in Revenue Requirement		\$6,733
22	Increase in Property Tax Due to Increase in Revenue Requirement (Line 21)		\$6,733
23	Increase in Revenue Requirement		\$607,597
24	Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)		1.108092%

REFERENCES:

Line 15: Composite Tax Rate obtained from Arizona Department of Revenue
Line 17: Company Schedule C-1 Page 2
Line 21: Line 19 - Line 20
Line 23: Schedule TBH-1

Liberty Utilities (Bella Vista Water) Corp.
Docket No. W-02465A-15-0367
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Schedule TBH-34

OPERATING INCOME ADJUSTMENT NO. 15 - INCOME TAX EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Income Tax Expense	\$55,166	\$176,005	\$231,171
2	Total	\$55,166	\$176,005	\$231,171

REFERENCES:

Column [A]: Company Schedule C-2
Column [B]: Testimony TBH
Column [C]: Column [A] + Column [B]

Liberty Utilities (Rio Rico Water & Sewer) Corp.

Sewer Division

Docket No. WS-02676A-15-0368

Test Year December 31, 2014

Schedules

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	[A] COMPANY FAIR VALUE	[B] STAFF FAIR VALUE
1	Adjusted Rate Base	\$5,355,381	\$4,905,082
2	Adjusted Operating Income (Loss)	\$320,976	\$382,687
3	Current Rate of Return (L2 / L1)	5.99%	7.80%
4	Required Rate of Return	8.60%	7.55%
5	Required Operating Income (L4 * L1)	\$460,616	\$370,334
6	Operating Income Deficiency (L5 - L2)	\$139,640	(\$12,354)
7	Gross Revenue Conversion Factor	1.6210	1.6210
8	Required Revenue Increase (L7 * L6)	\$226,351	(\$20,025)
9	Adjusted Test Year Revenue	\$1,478,323	\$1,478,323
10	Proposed Annual Revenue (L8 + L9)	\$1,704,674	\$1,458,298
11	Required Increase in Revenue (%)	15.31%	-1.35%
12	Rate of Return on Common Equity (%)	10.70%	10.70%

REFERENCES:

Column [A]: Company Schedule B-1

Column [B]: Staff Schedules OCRB, GRCF, TYOI & COC

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	[A]	[B]	[C]
	<i>Calculation of Gross Revenue Conversion Factor:</i>			
1	Revenue	100.0000%		
2	Uncollectible Factor (Line 13)	0.0000%		
3	Revenues (L1 - L2)	100.0000%		
4	Combined Federal and State Income Tax and Property Tax Rate (L29)	38.3081%		
5	Subtotal (L3 - L4)	61.6919%		
6	Revenue Conversion Factor (L1 / L5)	1.620957		
7				
8	<i>Calculation of Uncollectible Factor:</i>			
9	Unity	100.0000%		
10	Combined Federal and State Tax Rate (L21)	37.2340%		
11	One Minus Combined Income Tax Rate (L9 - L10)	62.7660%		
12	Uncollectible Rate	0.0000%		
13	Uncollectible Factor (L11 * L12)	0.0000%		
14				
15	<i>Calculation of Effective Tax Rate:</i>			
16	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%		
17	Arizona State Income Tax Rate	4.9000%		
18	Federal Taxable Income (L16 - L17)	95.1000%		
19	Applicable Federal Income Tax Rate (L69)	34.0000%		
20	Effective Federal Income Tax Rate (L18 * L19)	32.3340%		
21	Combined Federal and State Income Tax Rate (L17 + L20)		37.2340%	
22				
23	<i>Calculation of Effective Property Tax Factor:</i>			
24	Unity	100.0000%		
25	Combined Federal and State Income Tax Rate (L21)	37.2340%		
26	One Minus Combined Income Tax Rate (L24 - L25)	62.7660%		
27	Property Tax Factor (TBH-27, L21)	1.7112%		
28	Effective Property Tax Factor (L26 * L27)		1.0741%	
29	Combined Federal and State Income Tax and Property Tax Rate (L21 + L28)			38.3081%
30				
31	Required Operating Income (Schedule TBH-1, Line 5)	\$370,334		
32	Adjusted Test Year Operating Income (Loss) (Schedule TBH-14, L32)	382,687		
33	Required Increase in Operating Income (L31 - L32)		(\$12,354)	
34				
35	Income Taxes on Recommended Revenue (Col. [C], L66)	\$198,846		
36	Income Taxes on Test Year Revenue (Col. [A], L66)	196,755		
37	Required Increase in Revenue to Provide for Income Taxes (L35 - L36)		\$2,091	
38				
39	Recommended Revenue Requirement (Schedule TBH-1, L10)	\$1,458,298		
40	Uncollectible Rate (L12)	0.0000%		
41	Uncollectible Expense on Recommended Revenue (L39 * L40)	\$0		
42	Adjusted Test Year Uncollectible Expense	\$0		
43	Required Increase in Revenue to Provide for Uncollectible Exp. (L41 - L42)		\$0	
44				
45	Property Tax with Recommended Revenue (TBH-27, Col [B], L16)	\$50,101		
46	Property Tax on Test Year Revenue (TBH-27, Col [A], L16)	75,741		
47	Increase in Property Tax Due to Increase in Revenue (L45 - L46)		(25,640)	
48				
49	Total Required Increase in Revenue (L33 + L37 + L43 + L47)		(\$35,903)	
50				
51		Test Year		Staff Recommended
52	<i>Calculation of Income Taxes:</i>			
53	Revenue (Schedule TBH-14, Col. [C], L5 & Sch. TBH-1, Col. [D] L10)	\$1,478,323	(\$20,025)	\$1,458,298
54	Operating Expenses Excluding Income Taxes	898,882	(25,640)	873,242
55	Synchronized Interest (L69)	51,013		51,013
56	Arizona Taxable Income (L53 - L54 - L55)	\$528,429		\$534,044
57	Arizona State Income Tax Rate	4.9000%		4.9000%
58	Arizona Income Tax (L56 * L57)	25,893		26,168
59	Federal Taxable Income (L56 - L58)	\$502,536		\$507,875
60	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	7,500		7,500
61	Federal Tax on Second Income Bracket (\$50,001 - \$75,000) @ 25%	6,250		6,250
62	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	8,500		8,500
63	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	91,650		91,650
64	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	56,962		58,778
65	Total Federal Income Tax	170,862		172,678
66	Combined Federal and State Income Tax (L58 + L60)	\$196,755		\$198,846
67				
68				
69	Effective Tax Rate (Col. [C], L60 - Col. [A], L60) / (Col. [C], L59 - Col. [A], L59)			34.0000%
70				
71	<i>Calculation of Interest Synchronization:</i>			
72	Rate Base (Schedule TBH-3, Col. [C], L17)	\$4,905,082		
73	Weighted Average Cost of Debt (Schedule TBH-17, Col. [F], L1 + L2)	1.0400%		
74	Synchronized Interest (L67 * L68)	\$51,013		

RATE BASE - ORIGINAL COST/FAIR VALUE

LINE NO.	DESCRIPTION	[A]	[B]	ADJ. NO.	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS		STAFF AS ADJUSTED
1	Plant in Service	\$14,636,654	(\$558,659)	1-5	\$14,077,995
2	Less: Accumulated Depreciation	5,903,755	9,013	6	5,912,768
3	Net Plant in Service	\$8,732,899	(\$567,672)		\$8,165,227
4					
5	<u>LESS:</u>				
6					
7	Contributions in Aid of Construction (CIAC)	\$5,112,247	\$0		\$5,112,247
8	Less: Accumulated Amortization	2,935,215	0		2,935,215
9	Net CIAC	\$2,177,032	\$0		\$2,177,032
10					
11	Advances in Aid of Construction (AIAC)	\$529,379	\$0		\$529,379
12					
13	Customer Deposits	\$0	\$0		\$0
14					
15	Deferred Income Tax Credits	\$683,150	(\$104,114)	7	\$579,036
16					
17	Total Deductions	3,389,561	(104,114)		3,285,447
18					
19	<u>ADD:</u>				
20					
21	Deferred Regulatory Assets	\$0	\$0		\$0
22					
23	Cash Working Capital	11,300	13,259	8	24,559
24	Prepayments	743	0		743
25					
26	Total Additions	12,043	13,259		25,302
27					
28	Original Cost Rate Base	\$5,355,381	(\$450,299)		\$4,905,082

REFERENCES:

Column [A], Company Schedule B-1
Column [B]: Schedule TBH-4
Column [C]: Column [A] + Column [B]

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS													
LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Allocated Corporate Plant ADJ No. 1 Ref. Sch. TBH-5	[C] Reclassification ADJ No. 2 Ref. Sch. TBH-6	[D] Plant Adjustments ADJ No. 3 Ref. Sch. TBH-7	[E] Unsupported Plant ADJ No. 4 Ref. Sch. TBH-8	[F] INDOH Adjustment ADJ No. 5 Ref. Sch. TBH-9	[G] Accumulated Depreciation ADJ No. 6 Ref. Sch. TBH-10	[H] ADIT ADJ No. 7 Ref. Sch. TBH-11	[I] Working Capital ADJ No. 8 Ref. Sch. TBH-12	[J] Intentionally Left Blank ADJ No. 9 Ref. Sch. TBH-13	[K] STAFF ADJUSTED
PLANT IN SERVICE:													
1	351	Organization	\$5,785	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,785
2	352	Franchises	417	0	0	0	0	0	0	0	0	0	417
3	353	Land and Land Rights	7,545	0	0	0	0	0	0	0	0	0	7,545
4	354	Structures and Improvements	487,891	0	(189,417)	47,491	(14,369)	(17,555)	0	0	0	0	314,042
5	355	Power Generation Equipment	0	0	0	0	0	0	0	0	0	0	0
6	360	Collection Sewer Forced	636,023	0	0	0	0	0	0	0	0	0	636,023
7	361	Collection Sewers Gravity	6,699,939	0	0	0	0	(5,012)	0	0	0	0	6,694,927
8	362	Special Collecting Structures	0	0	0	0	0	(6,795)	0	0	0	0	0
9	363	Customer Services	1,286,513	0	0	850	0	0	0	0	0	0	1,280,567
10	364	Flow Measuring Devices	65,412	0	0	0	0	0	0	0	0	0	65,412
11	365	Flow Measuring Installations	0	0	0	0	0	0	0	0	0	0	0
12	370	Receiving Wells	867,120	0	0	0	0	0	0	0	0	0	867,120
13	371	Effluent Pumping Equipment	751,817	0	(304,005)	19,464	0	(22,077)	0	0	0	0	445,200
14	380	Treatment and Disposal Equipment	982,394	0	0	0	0	(3,296)	0	0	0	0	979,098
15	381	Plant Sewers	15,362	0	0	0	0	(610)	0	0	0	0	14,752
16	382	Outfall Sewer Lines	0	0	0	0	0	0	0	0	0	0	0
17	389	Other Sewer Plant & Equipment	63,376	0	(6,205)	0	0	0	0	0	0	0	57,171
18	390	Office Furniture & Equipment	142,738	0	(38,226)	0	0	(5,369)	0	0	0	0	99,143
19	390.1	Computers and Software	4,025	0	38,226	0	0	0	0	0	0	0	42,251
20	391	Transportation Equipment	117	0	6,205	0	0	(563)	0	0	0	0	5,759
21	393	Tools, Shop & Garage Equipment	19,957	0	0	370	0	(1,980)	0	0	0	0	18,347
22	394	Laboratory Equipment	6,152	0	0	0	(2,147)	(357)	0	0	0	0	3,648
23	395	Power Operated Equipment	29,947	0	0	0	0	(5,512)	0	0	0	0	24,435
24	396	Communication Equipment	6,057	0	0	0	0	(11)	0	0	0	0	6,046
25	398	Other Tangible Plant	3,913	0	0	0	0	0	0	0	0	0	3,913
26	398.1	Nogales - WWTTP	2,431,717	0	0	0	0	0	0	0	0	0	2,431,717
27		SUBTOTAL	14,514,217	0	(493,422)	68,175	(16,516)	(69,138)	0	0	0	0	14,003,317
28													
29	903	Land and Land Rights	5,880	(4,680)	0	0	0	0	0	0	0	0	1,200
30	904	Structures and Improvements	63,809	(42,727)	0	0	0	0	0	0	0	0	21,082
31	940	Office Furniture & Equipment	6,939	(0)	0	0	0	0	0	0	0	0	6,939
32	940.1	Computers and Software	45,811	(351)	0	0	0	0	0	0	0	0	45,460
33		Rounding	(2)	0	0	0	0	0	0	0	0	0	(2)
34		SUBTOTAL	122,437	(47,758)	0	0	0	0	0	0	0	0	74,679
35		Total Plant in Service	\$14,636,654	(\$47,758)	(\$493,422)	\$68,175	(\$16,516)	(\$69,138)	\$0	\$0	\$0	\$0	\$14,077,995
36		Less: Accumulated Depreciation	5,903,755		0	0	0	0	9,013	0	0	0	5,912,768
37													
38		Net Plant in Service (L36 - L38)	\$8,732,899	(\$47,758)	(\$493,422)	\$68,175	(\$16,516)	(\$69,138)	(\$9,013)	\$0	\$0	\$0	\$8,665,227
39													
40		LESS:											
41		Contributions in Aid of Construction (CIAC)	\$5,112,247	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,112,247
42		Less: Accumulated Amortization	2,935,215	0	0	0	0	0	0	0	0	0	2,935,215
43		Net CIAC (L43 - L44)	\$2,177,032	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,177,032
44		Advances in Aid of Construction (AIAC)	529,379	0	0	0	0	0	0	0	0	0	529,379
45		Customer Deposits	0	0	0	0	0	0	0	0	0	0	0
46		Deferred Income Taxes	683,150	0	0	0	0	0	0	(104,114)	0	0	579,036
47													
48		Deferred Reg Asset	0	0	0	0	0	0	0	0	0	0	0
49		Cash Working Capital	11,300	0	0	0	0	0	0	0	13,259	0	24,559
50		Prepayments	743	0	0	0	0	0	0	0	0	0	743
51		Original Cost Rate Base	\$5,355,381	(\$47,758)	(\$493,422)	\$68,175	(\$16,516)	(\$69,138)	(\$9,013)	\$104,114	\$13,259	\$0	\$4,905,082
52													
53													
54													
55													

Liberty Utilities (Rio Rico Water & Sewer) Corp. - Sewer Division
Docket No. WS-02676A-15-0368
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Schedule TBH-5

RATE BASE ADJUSTMENT NO. 1 - Allocated Corporate Plant and Accumulated Depreciation

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	903	Land and Land Rights	\$5,880	(\$4,680)	1,200
2	904	Structures & Improvements	63,809	(42,727)	21,082
3	940	Office Furniture and Equipment	6,939	(0)	6,939
4	940.1	Computers and Software	45,811	(351)	45,460
5					
6		Total		(\$47,758)	\$74,681

REFERENCES:

Column [A]: Company Schedule B-1

Column [B]: Column [C] less Column [A]

Column [C]: Company Workpapers, Company's response to Staff's DR TBH 5.9, TBH 7.4, TBH 7.5, TBH 2.43, Schedule B-2, Pg 3.3

Liberty Utilities (Rio Rico Water & Sewer) Corp. - Sewer Division
Docket No. WS-02676A-15-0368
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Schedule TBH-6

RATE BASE ADJUSTMENT NO. 2 - Reclassification					
LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	354	Structures - Sewer	\$0	(189,417)	(189,417)
2	371	Pumping Equipment - Sewer	0	(304,005)	(304,005)
3	390	Office	0	(38,226)	(38,226)
4	390.1	Computers	0	38,226	38,226
5	389	Other Sewer Plant & Equipment	0	(6,205)	(6,205)
6	391	Transportation Equipment	0	6,205	6,205
7		Total Reclass - Sewer	\$0	(\$493,422)	(\$493,422)
8					
9		Total to Rio Rico - Water			
10	354	Structures - Water	\$0	189,417	189,417
11	371	Pumping Equipment - Water	0	304,005	304,005
12		Total Reclass - Water	\$0	\$493,422	\$493,422

REFERENCES:

Column [A]:

Column [B]: Company's response to Staff's DR TBH 2.20, TBH 4.15, RUCO 2.10 PTY Plant and Testimony

Column [C]: Column [A] + Column [B]

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Schedule TBH-7

RATE BASE ADJUSTMENT NO. 3 - Plant Additions

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	354	Structures & Improvements	\$0	\$47,491	\$47,491
3	363	Customer Services	0	850	850
4	371	Pumping Equipment	0	19,464	19,464
5	393	Tools & Work Equipment	0	370	370
6		Total	\$0	\$68,175	\$68,175

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.20, TBH 4.15, PTY RUCO 2.10 and Testimony TBH

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Schedule TBH-8

RATE BASE ADJUSTMENT NO. 4 - Unsupported Plant

LINE NO.	ACCT. NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	354	Structures & Improvements	\$0	(\$14,369)	(\$14,369)
2	394	Laboratory Equipment	0	(2,147)	(2,147)
3		Totals	\$0	(\$16,516)	(\$16,516)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.20, TBH 4.15, PTY RUCO 2.10 and Testimony TBH

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Schedule TBH-9

RATE BASE ADJUSTMENT NO. 5 - INDOH Removal

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	354	Structures & Improvements	\$0	(\$17,555)	(\$17,555)
2	361	Wells & Springs	0	(5,012)	(5,012)
3	363	Raw Water Supply Mains	0	(6,795)	(6,795)
4	371	Electric Pumping Equipment	0	(22,077)	(22,077)
5	380	Water Treatment Equipment	0	(3,296)	(3,296)
6	381	Distribution Reservoirs & Standpipes	0	(610)	(610)
7	390	Transmission & Distribution Mains	0	(5,369)	(5,369)
8	391	Services	0	(563)	(563)
9	393	Meters & Meter Installations	0	(1,980)	(1,980)
10	394	Hydrants	0	(357)	(357)
11	395	Other Plant & Misc. Equip.	0	(5,512)	(5,512)
12	396	Office Furniture & Fixtures	0	(11)	(11)
		Total	\$0	(\$69,138)	(\$69,138)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 4.17, TBH 6.15 and TBH 7.16 and Testimony TBH

Liberty Utilities (Rio Rico Water & Sewer) Corp. - Sewer Division
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Schedule TBH-10

RATE BASE ADJUSTMENT NO. 6 - ACCUMULATED DEPRECIATION

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1		Accumulated Depreciation	\$5,903,755	\$9,013	\$5,912,768
2		Total	\$5,903,755	\$9,013	\$5,912,768

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Workpapers and Responses to DR responses.

Column [C]: Column [A] + Column [B]

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Schedule TBH-11

RATE BASE ADJUSTMENT NO. 7 - Accumulated Deferred Income Taxes ("ADIT")

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	ADIT	\$683,150	(\$104,114)	\$579,036

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, xxx

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 8 - WORKING CAPITAL

Line No.	Description	Proforma Test Year Amount ¹	Revenue Lag (Lead) Days	Expense Lag (Lead) Days	Net Lag (Lead) Days Col. C - Col. D	Lead/Lag Factor Col. E/365	Cash Working Capital Required Col. B * Col. F
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	OPERATING EXPENSES						
1	Salaries and Wages	\$0	47.96	\$0.00	47.96	0.13139726	\$0
2	Purchased Wastewater Treatment	112,810	47.96	29.82	18.14	0.04969863	5,607
3	Sludge Removal	0	47.96	0.00	47.96	0.13139726	0
4	Purchased Power	67,788	47.96	34.96	13.00	0.03561644	2,414
5	Fuel for Power Production	0	47.96	0.00	47.96	0.13139726	0
6	Chemicals	6,030	47.96	3.91	44.05	0.12068493	728
7	Materials and Supplies	7,433	47.96	17.14	30.82	0.08443836	628
8	Contractual Services - Professional	134,975	47.96	19.99	27.97	0.07663014	10,343
9	Contractual Services - Testing	405	47.96	8.50	39.46	0.10810959	44
10	Contractual Services - Other	150,950	47.96	22.47	25.49	0.06983562	10,542
11	Office Supplies and Expense	1,916	47.96	46.21	1.75	0.00479452	9
12	Rents	3,379	47.96	46.21	1.75	0.00479452	16
13	Transportation	10,899	47.96	20.78	27.18	0.07446575	812
14	Insurance	7,991	47.96	(182.50)	230.46	0.63139726	5,045
15	Miscellaneous	45,814	47.96	112.06	(64.10)	(0.17561644)	(8,046)
16	Interest Expense	53,515	90.25	0.00	90.25	0.24726027	13,232
17							
18							
19							
20	TAXES						
21	General Taxes-Property ¹	50,101	47.96	213.96	(166.00)	(0.45478995)	(\$22,786)
22	General Taxes-Other	0	47.96	0	47.96	0.13139726	0
23	Income Tax ¹	198,846	47.96	37.00	10.96	0.03002740	5,971
24							
25	OTHER						
26	Regulatory Commission Expense	0	47.96	(136.54)	184.50	0.50548402	0
27							
28							
29	TOTAL	\$ 852,853	WORKING CASH REQUIREMENT				\$ 24,559
30							
31			Per Co	Per Staff	Adjustment		
32	Cash Working Capital Requirement		\$ 11,300	\$ 24,559	\$ 13,259		
33	Required Bank Balances		0	0	0		
34	Prepayments		0	0	0		
35	Total Working Capital Allowance		11,300	24,559	13,259		

REFERENCES:

Column [A]: TBH -15, Application Schedule D2 pg1
Column [B]: Company's Schedule, Financing Application for Interest
Column [C]: Company's Schedule
Column [D]: Company's Schedule
Column [E]: Days Col. C - Col. D
Column [F]: Col. E/365
Column [G]: Col. B * Col. F

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Schedule TBH-13

RATE BASE ADJUSTMENT NO. 9 - Intentionally Left Blank

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1		xxxxxx	\$0	\$0	\$0
2					
3		Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, TBH

Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	ADJ. NO.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
1	REVENUES:						
2	Flat Rate Revenue	\$1,470,855	\$0		\$1,470,855	(\$20,025)	\$1,450,830
3	Measured Revenues	0	0		0	0	0
4	Misc Revenues	7,468	0		7,468	0	7,468
5		0	0		0	0	0
6	Total Operating Revenues	\$1,478,323	\$0		\$1,478,323	(\$20,025)	\$1,458,298
7							
8	OPERATING EXPENSES:						
9	Salaries and Wages	\$0	\$0		\$0	\$0	\$0
10	Purchased Wastewater Treatment	3,811	108,999	9	112,810	0	112,810
11	Sludge Removal	0	0		0	0	0
12	Purchased Power	67,788	0		67,788	0	67,788
13	Fuel for Power Production	0	0		0	0	0
14	Chemicals	6,030	0		6,030	0	6,030
15	Materials and Supplies	7,433	0		7,433	0	7,433
16	Contractual Services - Professional	167,347	(32,372)	1, 2, 4, 6-8	134,975	0	134,975
17	Contractual Services - Testing	405	0		405	0	405
18	Contractual Services - Other	260,568	(109,618)	4, 9	150,950	0	150,950
19	Office Supplies and Expenses	1,916	0		1,916	0	1,916
20	Rents	3,379	0		3,379	0	3,379
21	Transportation	10,899	0		10,899	0	10,899
22	Insurance	7,991	0		7,991	0	7,991
23	Regulatory Commission Expense	14,717	0		14,717	0	14,717
24	Miscellaneous	45,814	0		45,814	0	45,814
25	Depreciation	326,172	(68,139)	10	258,033	0	258,033
26	Taxes other than Income	0	0		0	0	0
27	Property Taxes	75,741	0	11	75,741	(25,640)	50,101
28	Income Taxes	157,337	39,418	12	196,755	2,091	198,846
29	Rounding	(1)	0		(1)	0	(1)
30	Total Operating Expenses	\$1,157,347	(\$61,711)		\$1,095,636	(\$23,549)	\$1,072,087
31							
32	Operating Income (Loss)	\$320,976	\$61,711		\$382,687	\$3,524	\$386,212
33							

References:

Column [A]: Company Schedule C-1

Column [B]: Schedule TBH-13

Column [C]: Column [A] + Column [B]

Column [D]: Schedules TBH-1 and TBH-2

Column [E]: Column [C] + Column [D]

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR								
LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]	[F]	[G]
		COMPANY AS FILED	Corporate Allocations - LUC, APUC, LUC-LABS ADJ No. 1 Ref. Sch TBH-16	Contractual Services - Professional Labor LU 8020 ADJ No. 2 Ref. Sch TBH-17	Intentionally Left Blank ADJ No. 3 Ref. Sch TBH-18	Corporate Cost Adjustment - Labor Increase ADJ No. 4 Ref. Sch TBH-19	Intentionally Left Blank ADJ No. 5 Ref. Sch TBH-20	Contractual Services - Professional Labor Capital Labor ADJ No. 6 Ref. Sch TBH-21
1	REVENUES:							
2	Flat Rate Revenue	\$1,470,855	\$0	\$0	\$0	\$0	\$0	\$0
3	Measured Revenues	0	0	0	0	0	0	0
4	Misc Revenues	7,468	0	0	0	0	0	0
5		0	0	0	0	0	0	0
6	Total Operating Revenues	\$1,478,323	\$0	\$0	\$0	\$0	\$0	\$0
7	OPERATING EXPENSES:							
8	Salaries and Wages	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9	Purchased Wastewater Treatment	3,811	0	0	0	0	0	0
10	Sludge Removal	0	0	0	0	0	0	0
11	Purchased Power	67,788	0	0	0	0	0	0
12	Fuel for Power Production	0	0	0	0	0	0	0
13	Chemicals	6,030	0	0	0	0	0	0
14	Materials and Supplies	7,433	0	0	0	0	0	0
15	Contractual Services - Professional	167,347	(26,596)	(7,313)	0	(809)	0	(1,509)
16	Contractual Services - Testing	405	0	0	0	0	0	0
17	Contractual Services - Other	260,568	0	0	0	0	0	0
18	Office Supplies and Expenses	1,916	0	0	0	0	0	0
19	Rents	3,379	0	0	0	0	0	0
20	Transportation	10,899	0	0	0	0	0	0
21	Insurance	7,991	0	0	0	0	0	0
22	Regulatory Commission Expense	14,717	0	0	0	0	0	0
23	Miscellaneous	45,814	0	0	0	0	0	0
24	Depreciation	326,172	0	0	0	0	0	0
25	Taxes other than Income	0	0	0	0	0	0	0
26	Property Taxes	75,741	0	0	0	0	0	0
27	Income Taxes	157,337	0	0	0	0	0	0
28	Rounding	(1)	0	0	0	0	0	0
29								
30	Total Operating Expenses	\$1,157,347	(\$26,596)	(\$7,313)	\$0	(\$1,427)	\$0	(\$1,509)
31	Operating Income (Loss)	\$320,976	\$26,596	\$7,313	\$0	\$1,427	\$0	\$1,509

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR										
LINE NO.	DESCRIPTION	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	
		Contractual Services - Professional Incentive Pay	Contractual Service - INDOH	Purchased Wastewater Treatment	Intentionally Left Blank	Depr. Exp.	Prop. Tax	Income Tax	STAFF ADJUSTED	
		ADJ No. 7 Ref. Sch TBH-22	ADJ No. 8 Ref. Sch TBH-23	ADJ No. 9 Ref. Sch TBH-24	ADJ No. 10 Ref. Sch TBH-25	ADJ No. 11 Ref. Sch TBH-26	ADJ No. 12 Ref. Sch TBH-27	ADJ No. 13 Ref. Sch TBH-28		
1	REVENUES:	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,470,855	
2	Flat Rate Revenue	0	0	0	0	0	0	0	0	
3	Measured Revenues	0	0	0	0	0	0	0	0	
4	Misc Revenues	0	0	0	0	0	0	0	7,468	
5		0	0	0	0	0	0	0	0	
6	Total Operating Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,478,323	
7										
8	OPERATING EXPENSES:									
9	Salaries and Wages	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
10	Purchased Wastewater Treatment	0	0	108,999	0	0	0	0	112,810	
11	Sludge Removal	0	0	0	0	0	0	0	0	
12	Purchased Power	0	0	0	0	0	0	0	67,788	
13	Fuel for Power Production	0	0	0	0	0	0	0	0	
14	Chemicals	0	0	0	0	0	0	0	6,030	
15	Materials and Supplies	0	0	0	0	0	0	0	7,433	
16	Contractual Services - Professional	(8,562)	12,417	0	0	0	0	0	134,975	
17	Contractual Services - Testing	0	0	0	0	0	0	0	405	
18	Contractual Services - Other	0	0	(108,999)	0	0	0	0	150,950	
19	Office Supplies and Expenses	0	0	0	0	0	0	0	1,916	
20	Rent	0	0	0	0	0	0	0	3,379	
21	Transportation	0	0	0	0	0	0	0	10,899	
22	Insurance	0	0	0	0	0	0	0	7,991	
23	Regulatory Commission Expense	0	0	0	0	0	0	0	14,717	
24	Miscellaneous	0	0	0	0	0	0	0	45,814	
25	Depreciation	0	0	0	0	(68,139)	0	0	258,033	
26	Taxes other than Income	0	0	0	0	0	0	0	0	
27	Property Taxes	0	0	0	0	0	0	0	75,741	
28	Income Taxes	0	0	0	0	0	0	39,418	196,755	
29	Rounding	0	0	0	0	0	0	0	(1)	
30	Total Operating Expenses	(\$8,562)	\$12,417	\$0	\$0	(\$68,139)	\$0	\$39,418	1,095,636	
31	Operating Income (Loss)	\$8,562	(\$12,417)	\$0	\$0	\$68,139	(\$0)	(\$39,418)	\$382,687	

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Schedule TBH-16

OPERATING INCOME ADJUSTMENT NO. 2 - Corporate Allocations - LUC, APUC, LUC-LABS

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Service - Professional APUC, LUC, LABS	\$43,687	(\$26,596)	\$17,091
2	(Labor and Non-Labor Allocations) TBH 6.1a	0	0	0
3	Total	\$43,687	(\$26,596)	\$17,091

REFERENCES:

Column [A]: Company Schedule C-2, Company's Responses to DR's TBH 2.7, TBH 4.2, TBH 6.1

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH

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Schedule TBH-17

OPERATING INCOME ADJUSTMENT NO. 2 - Contractual Services - Professional LU 8020

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional	\$0	(\$7,313)	(\$7,313)
2				
3	Total Revenues	\$0	(\$7,313)	(\$7,313)

REFERENCES:

Column [A]:

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 2.7

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Schedule TBH-18

OPERATING INCOME ADJUSTMENT NO. 3 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	xxxxxxx	\$0	\$0	\$0
2				
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2,

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B], ISAdj2

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Schedule TBH-19

OPERATING INCOME ADJUSTMENT NO. 4 - Corporate Cost Adjustment - Labor Increase

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professio	\$4,065	(\$809)	\$3,256
2	Contractual Services - Other	1,296	(618)	678
3	Total	\$5,361	(\$1,427)	\$3,934

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 6.1 and TBH 2.27

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Schedule TBH-20

OPERATING INCOME ADJUSTMENT NO. 5 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	xxxxxxx	\$0	\$0	\$0
2				
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B], ISAdj2

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Schedule TBH-21

OPERATING INCOME ADJUSTMENT NO. 6 - Corporate Cost Adjustment - HRIS Capital Labor

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional included in HRIS Corporate Plant	\$0	(\$1,509)	(\$1,509)
2				0
3	Total	\$0	(\$1,509)	(\$1,509)

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's response to TBH 5.9, TBH 7.4 and 7.5

Column [C]: Column [A] + Column [B]

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Schedule TBH-22

OPERATING INCOME ADJUSTMENT NO. 7 - Incentive Pay

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional Services	\$0	(\$8,562)	(\$8,562)
2		0	0	0
3	Total	\$0	(\$8,562)	(\$8,562)

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's response to RUCO 2.4 and TBH 2.35a

Column [C]: Column [A] + Column [B]

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Schedule TBH-23

OPERATING INCOME ADJUSTMENT NO. 8 - Contractual Services - Professional INDOH

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional Services	\$0	\$12,417	\$12,417
2		0	0	0
3	Total	\$0	\$12,417	\$12,417

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's supplemental response to TBH 2.7

Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 9 - Purchased Wastewater Treatment

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY AS FILED	STAFF ADJUSTMENTS (Col C - Col A)	STAFF AS ADJUSTED
1	Purchased Wastewater Treatment	\$0	\$108,999	(\$108,999)
2	Contractual Services - Other	0	(108,999)	\$108,999
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]:

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's General Ledger

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Schedule TBH-25

OPERATING INCOME ADJUSTMENT NO. 10 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	xxxxxx	\$0	\$0	\$0
2				
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B], ISAdj2

OPERATING INCOME ADJUSTMENT NO. 11 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A] PLANT In SERVICE Per Staff	[B] NonDepreciable or Fully Depreciated PLANT	[C] DEPRECIABLE PLANT (Col A - Col B)	[D] DEPRECIATION RATE	[E] DEPRECIATION EXPENSE (Col C x Col D)
1	351	Organization	\$5,785	\$5,785	\$0	0.00%	\$0
2	352	Franchises	417	417	0	0.00%	0
3	353	Land and Land Rights	7,545	7,545	0	0.00%	0
4	354	Structures and Improvements	314,042	0	314,042	3.33%	10,458
5	355	Power Generation Equipment	0	0	0	5.00%	0
6	360	Collection Sewer Forced	636,023	0	636,023	2.00%	12,720
7	361	Collection Sewers Gravity	6,694,927	0	6,694,927	2.00%	133,899
8	362	Special Collecting Structures	0	0	0	2.00%	0
9	363	Customer Services	1,280,567	0	1,280,567	2.00%	25,611
10	364	Flow Measuring Devices	65,412	65,412	0	10.00%	0
11	365	Flow Measuring Installations	0	0	0	10.00%	0
12	370	Receiving Wells	867,120	0	867,120	3.33%	28,875
13	371	Effluent Pumping Equipment	445,200	0	445,200	12.50%	55,650
14	380	Treatment and Disposal Equipment	979,098	0	979,098	5.00%	48,955
15	381	Plant Sewers	14,752	0	14,752	5.00%	738
16	382	Outfall Sewer Lines	0	0	0	3.33%	0
17	389	Other Sewer Plant & Equipment	57,171	57,171	0	6.67%	0
18	390	Office Furniture & Equipment	99,143	0	99,143	6.67%	6,613
19	390.1	Computers and Software	42,251	4,025	38,226	20.00%	7,645
20	391	Transportation Equipment	5,759	0	5,759	20.00%	1,152
21	393	Tools, Shop & Garage Equipment	18,347	5,139	13,208	5.00%	660
22	394	Laboratory Equipment	3,648	0	3,648	10.00%	365
23	395	Power Operated Equipment	24,435	0	24,435	5.00%	1,222
24	396	Communication Equipment	6,046	6,046	0	10.00%	0
25	398	Other Tangible Plant	3,913	3,913	0	10.00%	0
26	398.1	Nogales - WWTP	2,431,717	0	2,431,717	4.72%	114,777
27							
28		Subtotal Plant	\$14,003,317	\$155,453	\$11,416,147		\$449,339
29							
30		Corporate Plant					
31	903	Land and Land Rights	1,200	1200	(0)	0.00%	0
32	904	Structures and Improvements	21,082		21,082	3.33%	702
33	940	Office Furniture & Equipment	6,939		6,939	6.67%	463
34	940.1	Computers and Software	45,460	1726	43,734	20.00%	8,747
35							
36		Subtotal Corporate Plant	74,681	2,926	71,755		9,912
37							
38		Total Plant	14,077,997	158,379	11,487,902		459,251
39							
40		Composite Depreciation Rate (Depr Exp / Depreciable Plant):	3.94%				
41		CLAC:	\$5,112,247				
42		Amortization of CLAC (Line 25 x Line 26):	\$201,218				
43							
44		Depreciation Expense Before Amortization of CLAC:	\$459,251				
45		Less Amortization of CLAC:	201,218				
46		Test Year Depreciation Expense - Staff:	\$258,033				
47		Depreciation Expense - Company:	326,172				
48		Staff's Total Adjustment:	(\$68,139)				

REFERENCES:

Column [A]: Schedule TBH-4
Column [B]: From Column [A]
Column [C]: Column [A] - Column [B]
Column [D]: Engineering Staff Report
Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 12 - PROPERTY TAXES

LINE NO.	Property Tax Calculation	STAFF AS ADJUSTED	STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$1,478,323	\$1,478,323
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	\$2,956,646	\$2,956,646
4	Staff Recommended Revenue, Per Schedule CSB-1	1,478,323	(20,025)
5	Subtotal (Line 4 + Line 5)	\$4,434,969	\$2,936,621
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$1,478,323	\$978,874
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$2,956,646	\$1,957,748
10	Plus: 10% of CWIP -	0	0
11	Less: Net Book Value of Licensed Vehicles	5,844	5,844
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$2,950,802	\$1,951,904
13	Assessment Ratio	18.0%	18.0%
14	Assessment Value (Line 12 * Line 13)	\$531,144	\$351,343
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 3, Line 15)	14.2600%	14.2600%
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$75,741	\$0
17	Company Proposed Property Tax	75,741	
18	Staff Test Year Adjustment (Line 16-Line 17)	\$0	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$50,101
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		75,741
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		(\$25,640)
22	Increase to Property Tax Expense		(\$25,640)
23	Increase in Revenue Requirement		(1,498,348)
24	Increase to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.7112%

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OPERATING INCOME ADJUSTMENT NO. 13 - INCOME TAX EXPENSE

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Income Tax Expense	\$157,337	\$39,418	\$196,755
2				
3	Total	\$157,337	\$39,418	\$196,755

REFERENCES:

Column [A]: Company Schedule C-2

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B]

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Schedules

REVENUE REQUIREMENT					
LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]
		COMPANY ORIGINAL COST	COMPANY FAIR VALUE	STAFF ORIGINAL COST	STAFF FAIR VALUE
1	Adjusted Rate Base	\$8,861,632	\$8,861,632	\$9,266,140	\$9,266,140
2	Adjusted Operating Income (Loss)	\$340,290	\$340,290	\$445,254	\$445,254
3	Current Rate of Return (L2 / L1)	3.84%	3.84%	4.81%	4.81%
4	Required Rate of Return	8.60%	8.60%	7.55%	7.55%
5	Required Operating Income (L4 * L1)	\$762,189	\$762,189	\$699,594	\$699,594
6	Operating Income Deficiency (L5 - L2)	\$421,899	\$421,899	\$254,340	\$254,340
7	Gross Revenue Conversion Factor	1.6209	1.6209	1.6211	1.6211
8	Required Revenue Increase (L7 * L6)	\$683,856	\$683,856	\$412,298	\$412,298
9	Adjusted Test Year Revenue	\$3,032,792	\$3,032,792	\$3,032,792	\$3,032,792
10	Proposed Annual Revenue (L8 + L9)	\$3,716,648	\$3,716,648	\$3,445,090	\$3,445,090
11	Required Increase in Revenue (%)	22.55%	22.55%	13.59%	13.59%

References:

Column [A]: Company Schedule B-1

Column [B]: Company Schedule B-1

Column [C]: Staff Schedules OCRB, GRCE, TYOI & COC

Column [D]: Staff Schedules OCRB, GRCE, TYOI & COC

GROSS REVENUE CONVERSION FACTOR				
LINE NO.	DESCRIPTION	[A]	[B]	[C]
	<u>Calculation of Gross Revenue Conversion Factor:</u>			
1	Revenue	100.0000%		
2	Uncollectible Factor (Line 11)	0.0000%		
3	Revenues (L1 - L2)	100.0000%		
4	Combined Federal and State Tax Rate (L17) + Property Tax Factor (L22)	38.3117%		
5	Subtotal (L3 - L4)	61.6883%		
6	Revenue Conversion Factor (L1 / L5)	1.6211		
	<u>Calculation of Uncollectible Factor:</u>			
7	Unity	100.0000%		
8	Combined Federal and State Tax Rate (L17)	37.2340%		
9	One Minus Combined Income Tax Rate (L7 - L8)	62.7660%		
10	Uncollectible Rate	0.0000%		
11	Uncollectible Factor (L9 * L10)	0		
	<u>Calculation of Effective Tax Rate:</u>			
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%		
13	Arizona State Income Tax Rate	4.9000%		
14	Federal Taxable Income (L12 - L13)	95.1000%		
15	Applicable Federal Income Tax Rate (L44)	34.0000%		
16	Effective Federal Income Tax Rate (L14 * L15)	32.3340%		
17	Combined Federal and State Income Tax Rate (L13 + L16)	37.2340%		
	<u>Calculation of Effective Property Tax Factor:</u>			
18	Unity	100.0000%		
19	Combined Federal and State Tax Rate (L17)	37.2340%		
20	One Minus Combined Income Tax Rate (L18 - L19)	62.7660%		
21	Property Tax Factor (TBH-27, L24)	1.7170%		
22	Effective Property Tax Factor (L21 * L22)	1.07772%		
23	Combined Federal and State Tax and Property Tax Rate (L17 + L22)		38.3117%	
24	Required Operating Income (Schedule TBH-1, L5)	\$ 699,594		
25	Adjusted Test Year Operating Income (Loss) (Schedule TBH-14, L32)	\$ 445,254		
26	Required Increase in Operating Income (L24 - L25)		\$ 254,340	
27	Income Taxes on Recommended Revenue (Col. [D], L52)	\$ 338,517		
28	Income Taxes on Test Year Revenue (Col. [B], L52)	\$ 206,965		
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		\$ 131,552	
30	Recommended Revenue Requirement (Schedule TBH-1, L10)	\$ 3,445,090		
31	Uncollectible Rate (L10)	0.0000%		
32	Uncollectible Expense on Recommended Revenue (L24 * L25)	\$ -		
33	Adjusted Test Year Uncollectible Expense	\$0		
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		\$ -	
35	Property Tax with Recommended Revenue (TBH-27, L19)	\$ 162,137		
36	Property Tax on Test Year Revenue (TBH-18, L16)	\$ 155,057		
37	Increase in Property Tax Due to Increase in Revenue (TBH-18, L22)		\$ 7,079	
38	Total Required Increase in Revenue (L26 + L30 + L34 + L37)		\$ 392,971	
	<u>Calculation of Income Taxes:</u>			
	Test Year			STAFF Recommended
39	Revenue (Schedule TBH-14, Col.[C], L5 & Sch. TBH-1, Col. [B], L10)	\$3,032,792		\$3,445,090
40	Operating Expenses Excluding Income Taxes	\$2,380,574		2,439,562
41	Synchronized Interest (L47)	96,368		96,368
42	Arizona Taxable Income (L36 - L37 - L38)	\$ 555,850		\$ 909,161
43	Arizona State Income Tax Rate	4.9000%		4.9000%
44	Arizona Income Tax (L39 * L40)	\$ 27,237		\$ 44,549
45	Federal Taxable Income (L33 - L35)	\$ 528,613		\$ 864,612
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	7,500		7,500
47	Federal Tax on Second Income Bracket (\$50,001 - \$75,000) @ 25%	6,250		6,250
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	8,500		8,500
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	91,650		91,650
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	65,829		180,068
51	Total Federal Income Tax	\$ 179,729		\$ 293,968
52	Combined Federal and State Income Tax (L35 + L42)	\$ 206,965		\$ 338,517
53	Applicable Federal Income Tax Rate (Col. [D], L42 - Col. [B], L42] / [Col. [C], L36 - Col. [A], L36)			34.00%
	<u>Calculation of Interest Synchronization:</u>			
54	Rate Base (Schedule TBH-3, Col. [C], L17)	\$9,266,140		
55	Weighted Average Cost of Debt (Schedule TBH-1)	1.04%		
56	Synchronized Interest (L45 * L46)	\$ 96,368		

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Schedule TBH-3

RATE BASE - ORIGINAL COST/FAIR VALUE					
LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	ADJ. NO.	[C] STAFF AS ADJUSTED
1	Plant in Service	\$37,384,533	\$534,303	1-4	\$37,918,836
2	Less: Accumulated Depreciation	16,309,712	(47,061)	6	16,262,651
3	Net Plant in Service	\$21,074,821	\$581,364		\$21,656,185
4					
5	<u>LESS:</u>				
6					
7	Net Contribution in Aid-of Construction (CIAC)	\$9,873,760	\$0		\$9,873,760
8					
9	Advances in Aid of Construction (AIAC)	976,558	0		976,558
10					
11	Customer Deposits	332,034	0		332,034
12					
13	Deferred Income Tax Credits	1,121,537	147,815	7	1,269,352
14					
15	Total Deductions	\$12,303,889	\$147,815		\$12,451,704
16					
17	<u>ADD:</u>				
18	Unamortized Finance Charges	\$1,508	\$0		\$1,508
19					
20	Deferred Tax Assets	0	0		0
21					
22	Allowance for Working Capital	89,192	(29,041)	8	60,151
23					
24					
25					
26	Total Additions	\$90,700	(\$29,041)		\$61,659
27					
28	Original Cost Rate Base	\$8,861,632	\$404,508		\$9,266,140

REFERENCES:

Column [A]: Company Schedule B-1

Column [B]: Schedule TBH-4

Column [C]: Column [A] + Column [B]

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Allocated Corporate Plant ADJ No. 1 Ref. Sch. TBH-5	[C] Reclassification ADJ No. 2 Ref. Sch. TBH-6	[D] Plant Adjustments ADJ No. 3 Ref. Sch. TBH-7	[E] INDOH Adjustment ADJ No. 4 Ref. Sch. TBH-8	[F] Intentionally Left Blank ADJ No. 5 Ref. Sch. TBH-9	[G] Accumulated Depreciation ADJ No. 6 Ref. Sch. TBH-10	[H] ADIT ADJ No. 7 Ref. Sch. TBH-11	[I] Working Capital ADJ No. 8 Ref. Sch. TBH-12	[J] Intentionally Left Blank ADJ No. 9 Ref. Sch. TBH-13	[K] STAFF ADJUSTED
PLANT IN SERVICE:													
1	301	Organization Costs	\$5,785	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,785
2	302	Franchise Costs	417	0	0	0	0	0	0	0	0	0	417
3	303	Land & Land Rights	45,968	0	0	0	0	0	0	0	0	0	45,968
4	304	Structures & Improvements	3,030,713	0	109,643	45,025	(96)	0	0	0	0	0	3,185,285
5	307	Wells & Springs	505,898	0	0	0	(42,214)	0	0	0	0	0	463,684
6	309	Raw Water Supply Mains	272,502	0	0	0	(1)	0	0	0	0	0	272,501
7	310	Power Generation Equipment	219,360	0	0	0	0	0	0	0	0	0	219,360
8	311	Electric Pumping Equipment	1,952,570	0	304,005	64,952	(81,257)	0	0	0	0	0	2,240,269
9	320	Water Treatment Equipment	369,996	0	0	0	(199)	0	0	0	0	0	369,797
10	320.1	Water Treatment Plants	92	0	0	0	0	0	0	0	0	0	92
11	320.2	Solutions & Feeders	4,975	0	0	0	0	0	0	0	0	0	4,975
12	330	Distribution Reservoirs & Standpipes	759,320	0	0	0	(98)	0	0	0	0	0	759,222
13	330.1	Storage Tank	1,066	0	0	0	0	0	0	0	0	0	1,066
14	330.2	Pressure Tanks	144	0	0	0	0	0	0	0	0	0	144
15	331	Transmission & Distribution Mains	22,759,460	0	0	56,155	(28,577)	0	0	0	0	0	22,787,038
16	333	Services	4,034,788	0	0	420,369	(241,760)	0	0	0	0	0	4,213,397
17	334	Meters & Meter Installations	1,696,383	0	0	45,411	(63,159)	0	0	0	0	0	1,678,635
18	335	Hydants	635,868	0	0	1,138	(3,575)	0	0	0	0	0	633,431
19	336	Backflow Prevention Devices	15,855	0	0	0	0	0	0	0	0	0	15,855
20	339	Other Plant & Misc. Equip.	123,778	0	0	0	0	0	0	0	0	0	123,778
21	340	Office Furniture & Fixtures	115,867	0	(82,050)	0	(13,962)	0	0	0	0	0	19,855
22	340.1	Computer & Software	76,919	0	82,050	1,800	0	0	0	0	0	0	160,769
23	341	Transportation Equipment	141,853	0	0	0	38	0	0	0	0	0	141,891
24	342	Store Equipment	0	0	0	0	0	0	0	0	0	0	0
25	343	Tools & Work Equipment	97,663	0	(5,148)	8,117	(13,347)	0	0	0	0	0	87,286
26	344	Laboratory Equipment	3,061	0	0	0	0	0	0	0	0	0	3,061
27	345	Power Operated Equipment	0	0	0	0	0	0	0	0	0	0	0
28	346	Communications Equipment	218,183	0	84,921	0	(522)	0	0	0	0	0	302,583
29	347	Miscellaneous Equipment	5,427	0	0	0	0	0	0	0	0	0	5,427
30	348	Other Intangibles	0	0	0	0	0	0	0	0	0	0	0
31		Rounding	2	0	0	0	0	0	0	0	0	0	2
32		SUBTOTAL	37,093,913	0	493,422	642,967	(488,728)	0	0	0	0	0	37,741,573
ALLOCATED CORPORATE PLANT:													
33	903	Land & Land Rights	13,956	(11,108)	0	0	0	0	0	0	0	0	2,848
34	904	Structures & Improvements	151,457	(101,417)	0	0	0	0	0	0	0	0	50,040
35	940	Office Furniture & Fixtures	16,470	(0)	0	0	0	0	0	0	0	0	16,470
36	940.1	Computer & Software	108,737	(832)	0	0	0	0	0	0	0	0	107,905
37		Rounding	0	0	0	0	0	0	0	0	0	0	0
38		SUBTOTAL	290,620	(113,357)	0	0	0	0	0	0	0	0	177,263
39		Gross Utility Plant in Service	\$37,384,533	(\$113,357)	\$493,422	\$642,967	(\$488,728)	\$0	\$0	\$0	\$0	\$0	\$37,918,836
40		Less: Accumulated Depreciation	16,309,712	0	0	0	0	(47,061)	0	0	0	0	16,262,651
41		Net Utility Plant in Service (L39 - L40)	\$21,074,821	(\$113,357)	\$493,422	\$642,967	(\$488,728)	\$0	\$47,061	\$0	\$0	\$0	\$21,656,185
DEDUCTIONS:													
42		Contributions in Aid of Construction (CIAC)	\$20,261,911	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,261,911
43		Less: Accumulated Amortization	10,388,151	0	0	0	0	0	0	0	0	0	10,388,151
44		Net CIAC (L42 - L43)	\$9,873,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,873,760
45		Advances in Aid of Construction (AIAC)	976,558	0	0	0	0	0	0	0	0	0	976,558
46		Customer Meter Deposits	332,034	0	0	0	0	0	0	0	0	0	332,034
47		Deferred Income Tax Credits	1,121,537	0	0	0	0	0	147,815	0	0	0	1,269,352
48		Total Deductions	\$12,303,889	\$0	\$0	\$0	\$0	\$0	\$147,815	\$0	\$0	\$0	\$12,451,704
ADDITIONS:													
49		Prepays	\$1,508	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,508
50		Deferred Tax Assets	0	0	0	0	0	0	0	0	0	0	0
51		Allowance for Working Capital	89,192	0	0	0	0	0	0	0	(29,041)	0	60,151
52		Intentionally Left Blank	0	0	0	0	0	0	0	0	0	0	0
53		Total Additions	\$90,700	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$29,041)	\$0	\$61,659
54		ORIGINAL COST RATE BASE	\$5,861,632	(\$113,357)	\$493,422	\$642,967	(\$488,728)	\$0	\$47,061	(\$147,815)	(\$29,041)	\$0	\$9,266,140

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Schedule TBH-5

RATE BASE ADJUSTMENT NO. 1 - Allocated Corporate Plant

LINE NO.	ACCT NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	903	Land and Land Rights	\$13,956	(\$11,108)	2,848
2	904	Structures & Improvements	151,457	(101,417)	50,040
3	940	Office Furniture and Equipment	16,470	(0)	16,470
4	940.1	Computers and Software	108,737	(832)	107,905
5					
6		Total	\$290,620	(\$113,357)	\$177,263

REFERENCES:

Column [A]: Company Schedule B-1

Column [B]: Column [C] less Column [A]

Column [C]: Company Workpapers, Company's response to Staff's DR TBH 5.9, TBH 7.4, TBH 7.5, TBH 2.43, Schedule B-2, Pg 3.3

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Schedule TBH-6

RATE BASE ADJUSTMENT NO. 2 - Reclassification

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	304	Structures - Water	\$0	\$109,643	\$109,643
2	311	Pumping Equipment	0	304,005	304,005
3	333	Services	0	0	0
4	340	Office	0	(82,050)	(82,050)
5	340.1	Computers	0	82,050	82,050
6	343	Tools, Shop & Garage Equipment	0	(5,148)	(5,148)
7	346	Communication Equipment	0	84,921	84,921
8		Total Reclass - Water	\$0	\$493,422	\$493,422
9					
10		<u>Total from Rio Rico - Sewer</u>			
11	354	Structures - Sewer	\$0	(189,417)	(189,417)
12	371	Pumping Equipment - Sewer	0	(304,005)	(304,005)
13		Total Reclass - Sewer	\$0	(\$493,422)	(\$493,422)

REFERENCES:

Column [A]:

Column [B]: Company's response to Staff's DR TBH 2.19 TBH 4.14, RUCO 2.10 PTY Plant and Testimony

Column [C]: Column [A] + Column [B]

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Schedule TBH-7

RATE BASE ADJUSTMENT NO. 3 - Plant Additions

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	304	Structures & Improvements	\$0	\$45,025	\$45,025
2	311	Pumping Equipment	0	64,952	64,952
3	331	Transmission & Distribution Mains	0	56,155	56,155
4	333	Services	0	420,369	420,369
5	334	Meters & Meter Installations	0	45,411	45,411
6	335	Hydrants	0	1,138	1,138
7	340.1	Computer & Software	0	1,800	1,800
8	343	Tools & Work Equipment	0	8,117	8,117
9		Total	\$0	\$642,967	\$642,967

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 2.19, TBH 4.14, PTY RUCO 2.10 and Testimony TBH

RATE BASE ADJUSTMENT NO. 4 - INDOH Removal

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	303	Land and Land Rights	\$0	(\$96)	(\$96)
2	304	Structures & Improvements	0	(42,214)	(42,214)
3	307	Wells & Springs	0	(1)	(1)
4	311	Electric Pumping Equipment	0	(81,257)	(81,257)
5	320	Water Treatment Equipment	0	(199)	(199)
6	330	Distribution Reservoirs & Standpipes	0	(98)	(98)
7	331	Transmission & Distribution Mains	0	(28,577)	(28,577)
8	333	Services	0	(241,760)	(241,760)
9	334	Meters & Meter Installations	0	(63,159)	(63,159)
10	335	Hydrants	0	(3,575)	(3,575)
11	340	Office Furniture and Equipment	0	(13,962)	(13,962)
12	341	Transportation Equipment	0	38	38
13	343	Tools & Work Equipment	0	(13,347)	(13,347)
14	346	Communications Equipment	0	(522)	(522)
15					
16		Total	\$0	(\$488,728)	(\$488,728)

REFERENCES:

Column [A]:

Column [B] , Col [C] less Col [A]

Column [C]: Company's response to Staff's DR 4.17, TBH 6.15 and TBH 7.16 and Testimony TBH

Liberty Utilities (Rio Rico Water & Sewer) Corp. - Water Division
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Schedule TBH-9

RATE BASE ADJUSTMENT NO. 5 - Intentionally Left Blank

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1		xxxx	\$0	\$0	\$0
2			0	0	0
3		Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule B-2
Column [B]: Testimony TBH
Column [C]: Column [A] + Column [B]

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Schedule TBH-10

RATE BASE ADJUSTMENT NO. 6 - ACCUMULATED DEPRECIATION
--

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	Accumulated Depreciation	\$16,309,712	(\$47,061)	\$16,262,651
2	Total	\$16,309,712	(\$47,061)	\$16,262,651

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Workpapers and Responses to DR responses.

Column [C]: Column [A] + Column [B]

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Schedule TBH-11

RATE BASE ADJUSTMENT NO. 7 - Accumulated Deferred Income Taxes ("ADIT")

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1	ADIT	\$1,121,537	\$147,815	\$1,269,352

REFERENCES:

Column [A]: Company Schedule B-2

Column [B]: Testimony, Company's Response DR, Company Schedule B-2 ADJ 5 pages 7.0-7.1

Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 8 - Cash Working Capital							
Line No.	Description	Proforma Test Year Amount ¹	Revenue Lag (Lead) Days	Expense Lag (Lead) Days	Net Lag (Lead) Days Col. C - Col. D	Lead/Lag Factor Col. E/365	Cash Working Capital Required Col. B * Col. F
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	OPERATING EXPENSES						
2	Salaries and Wages	\$0	47.96	\$0.00	47.96	0.13139726	\$0
3	Purchased Water	69,895	47.96	27.48	20.48	0.05610959	3,922
4	Purchased Power	324,148	47.96	29.04	18.92	0.05183562	16,802
5	Chemicals	4,602	47.96	0.42	47.54	0.13024658	599
6	Fuel for Power Production	0	47.96	0.00	47.96	0.13139726	0
7	Repairs and Maintenance	0	47.96	32.84	15.12	0.04142466	0
8	Office Supplies and Expense	34,071	47.96	38.69	9.27	0.02539726	865
9	Outside Services	0	47.96	0.00	47.96	0.13139726	0
10	Contractual Services - Professional	437,429	47.96	20.03	27.93	0.07652055	33,472
11	Contractual Services - Testing	39,413	47.96	28.21	19.75	0.05410959	2,133
12	Contractual Services - Other	496,873	47.96	22.20	25.76	0.07057534	35,067
13	Water Testing	0	47.96	0.00	47.96	0.13139726	0
14	Rents	4,169	47.96	(5.40)	53.36	0.14619178	609
15	Transportation	60,352	47.96	28.43	19.53	0.05350685	3,229
16	Insurance	27,865	47.96	(182.50)	230.46	0.63139726	17,594
17	Materials and Supplies	29,680	47.96	32.84	15.12	0.04142466	1,229
18	Miscellaneous	61,392	47.96	31.38	16.58	0.04542466	2,789
19	Interest Expense	117,367	90.25	0.00	90.25	0.24726027	29,020
20							
21							
22							
23	TAXES						
24	General Taxes-Property ¹	214,045	47.96	213.96	(166.00)	(0.45478995)	\$ (97,345)
25	General Taxes-Other	0	47.96	0.00	47.96	0.13139726	0
26	Income Tax ¹	338,517	47.96	37.00	10.96	0.03002740	10,165
27							
28	OTHER						
29	Regulatory Commission Expense	0	47.96	(136.54)	184.50	0.50548402	0
30							
31							
32	TOTAL	\$ 2,259,818	WORKING CASH REQUIREMENT				\$ 60,151
33							
	Cash Working Capital Requirement		Per Co	Per Staff	Adjustment		
	Total Working Capital Allowance		\$ 89,192	\$ 60,151	\$ (29,041)		
			89,192	60,151	(29,041)		

REFERENCES:

Column [A]: TBH -15, Application Schedule D2 pg1
Column [B]: Company's Schedule, Financing Application for Interest
Column [C]: Company's Schedule
Column [D]: Company's Schedule
Column [E]: Days Col. C - Col. D
Column [F]: Col. E/365
Column [G]: Col. B * Col. F

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Schedule TBH-13

RATE BASE ADJUSTMENT NO. 9 - Intentionally Left Blank

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY AS FILED	ADJUSTMENT	STAFF ADJUSTED
1		xxxx	\$0	\$0	\$0
2			0	0	0
3		Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule B-2
Column [B]: Testimony TBH
Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	ADJ NO.	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
1		<u>REVENUES:</u>						
2	461	Metered Water Sales	\$2,984,538	\$0		\$2,984,538	\$412,298	\$3,396,836
3	460	Water Sales - Unmetered	0	0		0	0	0
4	474	Other Operating Revenue	48,254	0		48,254	0	48,254
5		Total Operating Revenues	\$3,032,792	\$0		\$3,032,792	\$412,298	\$3,445,090
6								
7		<u>OPERATING EXPENSES:</u>						
8	601	Salaries & Wages	\$0	\$0		\$0	\$0	\$0
9	610	Purchased Water	69,895	0		69,895	0	69,895
10	615	Purchased Power	324,148	0		324,148	0	324,148
11	618	Chemicals	4,602	0		4,602	0	4,602
12	620	Repairs & Maintenance	0	0		0	0	0
13	621	Office Supplies & Expense	34,071	0		34,071	0	34,071
14	630	Outside services	0	0		0	0	0
15	634/632	Contractual Services - Professional	1,039,036	(601,607)	1-4, 6-8	437,429	0	437,429
16	635	Contractual Services - Testing	41,807	(2,394)	9	39,413	0	39,413
17	636	Contractual Services - Other	97,904	398,969	3-4	496,873	0	496,873
18	635	Water Testing	0	0		0	0	0
19	641	Rents	4,169	0		4,169	0	4,169
20	650	Transportation Expense	60,352	0		60,352	0	60,352
21	657	Insurance	27,865	0		27,865	0	27,865
22	666	Regulatory Commission Expense	33,172	0		33,172	0	33,172
23	620	Materials and Supplies	29,680	0		29,680	0	29,680
24	675	Miscellaneous Expense	61,392	0		61,392	0	61,392
25	403	Depreciation Expense	562,211		11	602,456	0	602,456
26	408	Taxes Other than Income	0	0		0	0	0
27	408.11	Property Taxes	155,057	0	12	155,057	7,079	214,045
28	409	Income Tax	147,142	59,823	13	206,965	131,552	338,517
29		Rounding	(1)			(1)		(1)
30		Total Operating Expenses	\$2,692,502	(\$145,209)		\$2,587,538	\$138,631	\$2,778,078
31								
32		Operating Income (Loss)	\$340,290	\$145,209		\$445,254	\$273,667	\$667,013
33								

REFERENCES:

Column [A]: Company Schedule C-1 (TAB IS-ADJ)

Column [B]: Schedule TBH-15

Column [C]: Column [A] + Column [B]

Column [D]: Schedules TBH-27 and TBH-2

Column [E]: Column [C] + Column [D]

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR																	
LINE NO.	ACCT. NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]
		COMPANY AS FILED		Corporate Allocations - LUC, APUC, LUC-LABS	Contractual Services - Professional Labor LU 8020	Contractual Services - Professional Ref. S&T TBH-17	Corporate Cost Adjustment - Labor Increase	Intentionally Left Blank	Contractual Services - Professional Incentive Pay	Contractual Service - INDOH	Water Testing	Intentionally Left Blank	Deprec. Exp.	Prop. Tax		Income Tax	STAFF ADJUSTED
			ADI No. 1	ADI No. 2	ADI No. 3	ADI No. 4	ADI No. 5	ADI No. 6	ADI No. 7	ADI No. 8	ADI No. 9	ADI No. 10	ADI No. 11	ADI No. 12	ADI No. 13	ADI No. 14	
1		REVENUES:															
2		461 Metered Water Sales	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,084,538
3		460 Water Sales - Unmetered	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4		474 Other Operating Revenue	48,254	0	0	0	0	0	0	0	0	0	0	0	0	0	48,254
5		Total Operating Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,132,792
6		OPERATING EXPENSES:															
7		OPERATING EXPENSES:															
8		601 Salaries & Wages	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
9		610 Purchased Water	69,895	0	0	0	0	0	0	0	0	0	0	0	0	0	69,895
10		615 Purchased Power	324,148	0	0	0	0	0	0	0	0	0	0	0	0	0	324,148
11		618 Chemicals	4,602	0	0	0	0	0	0	0	0	0	0	0	0	0	4,602
12		620 Repairs & Maintenance	34,071	0	0	0	0	0	0	0	0	0	0	0	0	0	34,071
13		621 Office Supplies & Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14		630 Outside services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15		634/352 Contractual Services - Professional	1,039,036	(75,587)	(114,276)	(381,700)	(114,276)	(3,582)	(20,323)	29,474	(2,399)	0	0	0	0	0	437,429
16		635 Contractual Services - Testing	41,807	0	0	0	0	0	0	0	0	0	0	0	0	0	39,413
17		636 Contractual Services - Other	97,904	0	0	381,700	17,269	0	0	0	0	0	0	0	0	0	496,873
18		635 Water Testing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19		641 Rents	4,169	0	0	0	0	0	0	0	0	0	0	0	0	0	4,169
20		650 Transportation Expense	60,352	0	0	0	0	0	0	0	0	0	0	0	0	0	60,352
21		657 Insurance	27,865	0	0	0	0	0	0	0	0	0	0	0	0	0	27,865
22		666 Regulatory Commission Expense	33,172	0	0	0	0	0	0	0	0	0	0	0	0	0	33,172
23		620 Materials and Supplies	29,680	0	0	0	0	0	0	0	0	0	0	0	0	0	29,680
24		675 Miscellaneous Expense	61,392	0	0	0	0	0	0	0	0	0	0	0	0	0	61,392
25		403 Depreciation Expense	562,211	0	0	0	0	0	0	0	0	0	0	0	0	0	602,456
26		408 Taxes Other than Income	0	0	0	0	0	0	0	0	0	0	40,245	0	0	0	0
27		408.11 Property Taxes	155,057	0	0	0	0	0	0	0	0	0	0	0	0	0	155,057
28		409 Income Tax	147,142	0	0	0	0	0	0	0	0	0	0	0	0	0	206,905
29		Rounding	(1)	0	0	0	0	0	0	0	0	0	0	0	0	59,823	0
30		Total Operating Expenses	\$2,692,502	(\$75,587)	(\$111,276)	\$0	(\$21,342)	\$0	(\$20,323)	\$29,474	(\$2,399)	\$0	\$40,245	\$0	\$0	\$59,823	\$2,387,330
31		Operating Income (Loss)	\$430,290	\$75,587	\$111,276	\$0	\$21,342	\$0	\$20,323	(\$29,474)	\$2,399	\$0	(\$40,245)	\$0	\$0	(\$59,823)	\$445,253

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Schedule TBH-16

OPERATING INCOME ADJUSTMENT NO. 1 - Corporate Allocations - LUC, APUC, LUC-LABS				
LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Service - Professional APUC, LUC, LABS	\$116,154	(\$75,587)	\$40,567
2	(Labor and Non-Labor Allocations) TBH 6.1a	0	0	0
3	Total	\$116,154	(\$75,587)	\$40,567

REFERENCES:

Column [A]: Company Schedule C-2, Company's Responses to DR's TBH 2.7, TBH 4.2, TBH 6.1
Column [B]: Column [C] less Column [A]
Column [C]: Testimony TBH

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Schedule TBH-17

OPERATING INCOME ADJUSTMENT NO. 2 - Contactual Services - Professional LU 8020

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Contractual Services - Professional	\$0	(\$111,276)	(\$111,276)
2				
3	Total Revenues	\$0	(\$111,276)	(\$111,276)

REFERENCES:

Column [A]:

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 2.7

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Schedule TBH-18

OPERATING INCOME ADJUSTMENT NO. 3 - Corporate Cost Labor Reclassification				
		[A]	[B]	[C]
LINE		COMPANY	STAFF	STAFF
NO.	DESCRIPTION	PROPOSED	ADJUSTMENT	RECOMMENDED
1	Contractual Services - Professional	\$0	(\$381,700)	(\$381,700)
2	Contractual Services - Other	0	381,700	381,700
3	Total Revenues	\$0	\$0	\$0

REFERENCES:

Column [A]:

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 6.1, TBH 2.28 and TBH 2.27

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Schedule TBH-19

OPERATING INCOME ADJUSTMENT NO. 4 - Corporate Cost Adjustment - Labor Increase

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Contractual Services - Professional	\$46,334	(\$38,612)	\$7,722
2	Contractual Services - Other	3,984	17,269	21,253
3	Total	\$50,318	(\$21,342)	\$28,976

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Column [C] less Column [A]

Column [C]: Testimony TBH, Company's supplemental response to TBH 6.1 and TBH 2.27

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Schedule TBH-20

OPERATING INCOME ADJUSTMENT NO. 5 - Intentionally Left Blank
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		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	xxxx	\$0	\$0	\$0
2		0	0	0
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Testimony TBH

Column [C]: Column [A] + Column [B]

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Schedule TBH-21

OPERATING INCOME ADJUSTMENT NO. 6 - Corporate Cost Adjustment - HRIS Capital Labor

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional included in HRIS Corporate Plant	\$0	(\$3,582)	(\$3,582)
	Total	\$0	(\$3,582)	(\$3,582)

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's response to TBH 5.9, TBH 7.4 and 7.5

Column [C]: Column [A] + Column [B]

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Schedule TBH-22

OPERATING INCOME ADJUSTMENT NO. 7 - Incentive Pay

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional Services	\$0	(\$20,323)	(\$20,323)
2		0	0	0
3	Total	\$0	(\$20,323)	(\$20,323)

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's response to RUCO 2.4 and TBH 2.35a

Column [C]: Column [A] + Column [B]

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Schedule TBH-23

OPERATING INCOME ADJUSTMENT NO. 8 - Contractual Services - Professional INDOH

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Contractual Services - Professional Services	\$0	\$29,474	\$29,474
2		0	0	0
3	Total	\$0	\$29,474	\$29,474

REFERENCES:

Column [A]:

Column [B]: Testimony TBH, Company's supplemental response to TBH 2.7

Column [C]: Column [A] + Column [B]

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Schedule TBH-24

OPERATING INCOME ADJUSTMENT NO. 9 - Contractual Services - Testing

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Contractual Services - Testing	\$41,807	(\$2,394)	\$39,413
2		0	0	0
3	Total	\$41,807	(\$2,394)	\$39,413

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers

Column [B]: Testimony TBH, Staff's Engineering Report and Testimony

Column [C]: Column [A] + Column [B]

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Schedule TBH-25

OPERATING INCOME ADJUSTMENT NO. 10 - Intentionally Left Blank

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	xxxxxxx	\$0	\$0	\$0
2		0	0	0
3	Total	\$0	\$0	\$0

REFERENCES:

Column [A]: Company Schedule C-2 & Workpapers
Column [B]: Testimony TBH
Column [C]: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT No. 11 - DEPRECIATION EXPENSE

Line No.	ACCT NO.	DESCRIPTION	[A] GROSS UTILITY PLANT IN SERVICE	[B] FULLY/NON DEPRECIABLE	[C] DEPRECIABLE PLANT	[D] DEPREC. RATE	[E] EXPENSE
Plant In Service							
1	301	Organization Costs	\$5,785	\$5,785	\$0	0.00%	\$0
2	302	Franchise Costs	417	417	0	0.00%	0
3	303	Land & Land Rights	45,968	45,968	0	0.00%	0
4	304	Structures & Improvements	3,185,285	0	3,185,285	3.33%	106,070
5	307	Wells & Springs	463,684	0	463,684	3.33%	15,455
6	309	Raw Water Supply Mains	272,501	0	272,501	2.00%	5,450
7	310	Power Generation Equipment	219,360	0	219,360	5.00%	10,968
8	311	Electric Pumping Equipment	2,240,269	0	2,240,269	12.50%	280,034
9	320	Water Treatment Equipment	369,797	0	369,797	3.33%	12,314
10	320.1	Water Treatment Plants	92	0	92	3.33%	3
11	320.2	Solutions & Feeders	4,975	0	4,975	20.00%	995
12	330	Distribution Reservoirs & Standpipes	759,222	0	759,222	2.22%	16,855
13	330.1	Storage Tank	1,066	0	1,066	2.22%	24
14	330.2	Pressure Tanks	144	0	144	5.00%	7
15	331	Transmission & Distribution Mains	22,787,038	0	22,787,038	2.00%	455,741
16	333	Services	4,213,397	0	4,213,397	3.33%	140,306
17	334	Meters & Meter Installations	1,678,635	0	1,678,635	8.33%	139,881
18	335	Hydrants	633,431	0	633,431	2.00%	12,669
19	336	Backflow Prevention Devices	15,855	0	15,855	6.67%	1,058
20	339	Other Plant & Misc. Equip.	123,778	0	123,778	6.67%	8,256
21	340	Office Furniture & Fixtures	19,855	0	19,855	6.67%	1,324
22	340.1	Computer & Software	160,769	76,919	83,850	20.00%	16,770
23	341	Transportation Equipment	141,891	138,029	3,862	20.00%	772
24	342	Store Equipment	0	0	0	4.00%	0
25	343	Tools & Work Equipment	87,286	0	87,286	5.00%	4,364
26	344	Laboratory Equipment	3,061	0	3,061	10.00%	306
27	345	Power Operated Equipment	-	0	0	5.00%	0
28	346	Communications Equipment	302,583	0	302,583	10.00%	30,258
29	347	Miscellaneous Equipment	5,427	0	5,427	10.00%	543
30	348	Other Intangibles	0	0	0	0.00%	0
31							
32		Subtotal General	\$37,741,571	\$267,118	\$37,474,453		\$1,260,422
33							
Corporate Plant							
35	903	Land & Land Rights	2,848	2,848	0	0.00%	0
36	904	Structures & Improvements	50,040	0	50,040	3.33%	1,666
37	940	Office Furniture & Fixtures	16,470	0	16,470	6.67%	1,099
38	940.1	Computer & Software	107,905	4,098	103,808	20.00%	20,762
39							
40		Subtotal Corporate Plant	\$177,263	\$6,946	\$170,318		\$23,526
41							
42		Total	\$37,918,834	\$274,064	\$37,644,770		\$1,283,948
43							
44		Contribution(s) in Aid of Construction (Gross)	\$20,261,911				
45		Less: Non Amortizable Contribution(s)	0				
46		Fully Amortized Contribution(s)	0				
47		Amortizable Contribution(s)	\$20,261,911				
48		Times: Staff Proposed Amortization Rate	3.363%				
49		Amortization of CIAC	681,492				\$681,492
50		Less: Amortization of Contributions					
51							
52		Staff Recommended Depreciation Expense					\$602,456
53		Company Proposed Depreciation Expense					562,211
54		Increase/(Decrease) to Depreciation Expense					\$40,245

REFERENCES:

Column [A]: Schedule TBH-4
Column [B]: From Column [A]
Column [C]: Column [A] - Column [B]
Column [D]: Engineering Staff Report
Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT No. 12 - PROPERTY TAXES

LINE NO.	DESCRIPTION	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$3,032,792	\$3,032,792
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	\$6,065,584	\$6,065,584
4	Staff Recommended Revenue	3,032,792	3,445,090
5	Subtotal (Line 4 + Line 5)	\$9,098,376	\$9,510,674
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$3,032,792	\$3,170,225
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$6,065,584	\$6,340,450
10	Plus: 10% of CWIP	0	0
11	Less: Net Book Value of Licensed Vehicles	1,975	0
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$6,063,609	\$6,340,450
13	Assessment Ratio	18.00%	18.00%
14	Assessment Value (Line 12 * Line 13)	\$1,091,450	\$1,141,281
15	Composite Property Tax Rate - Obtained from ADOR	14.2066%	14.20656%
16	Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	\$155,057	
17	Company Proposed Property Tax	155,057	
18	Staff Test Year Adjustment (Line 16 - Line 17)	\$0	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$162,137
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		155,057
21	Increase in Property Tax Due to Increase in Revenue Requirement		\$7,079
22	Increase in Property Tax Due to Increase in Revenue Requirement (Line 21)		\$7,079
23	Increase in Revenue Requirement		\$412,298
24	Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)		1.717039%

REFERENCES:

Line 15: Composite Tax Rate obtained from Arizona Department of Revenue
Line 17: Company Schedule C-1 Page 2
Line 21: Line 19 - Line 20
Line 23: Schedule TBH-1

Liberty Utilities (Rio Rico Water & Sewer) Corp. - Water Division
Docket No. WS-02676A-15-0368
Test Year December 31, 2014

Schedule TBH-28

OPERATING INCOME ADJUSTMENT NO. 13 - INCOME TAX EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENT	STAFF RECOMMENDED
1	Income Tax Expense	\$147,142	\$59,823	\$206,965
2		0	0	0
3	Total	\$147,142	\$59,823	\$206,965

REFERENCES:

Column [A]: Company Schedule C-2
Column [B]: Testimony TBH
Column [C]: Column [A] + Column [B]

COST ALLOCATION MANUAL

otherwise required by law or regulation. Generally, transfer of assets from an affiliate to the utility should be at the lower of prevailing market price or net book value, except as otherwise required by law or regulation. To determine prevailing market value, an appraisal should be required at certain value thresholds as determined by regulators.

4. Entities should maintain all information underlying affiliate transactions with the affiliated utility for a minimum of three years, or as required by law or regulation.

E. AUDIT REQUIREMENTS

1. An audit trail should exist with respect to all transactions between the regulated entity and its affiliates that relate to regulated services and products. The regulator should have complete access to all affiliate records necessary to ensure that cost allocations and affiliate transactions are conducted in accordance with the guidelines. Regulators should have complete access to affiliate records, consistent with state statutes, to ensure that the regulator has access to all relevant information necessary to evaluate whether subsidization exists. The auditors, not the audited utilities, should determine what information is relevant for a particular audit objective. Limitations on access would compromise the audit process and impair audit independence.

2. Each regulated entity's cost allocation documentation should be made available to the company's internal auditors for periodic review of the allocation policy and process and to any jurisdictional regulatory authority when appropriate and upon request.

3. Any jurisdictional regulatory authority may request an independent attestation engagement of the CAM. The cost of any independent attestation engagement associated with the CAM, should be shared between regulated and non-regulated operations consistent with the allocation of similar common costs.

4. Any audit of the CAM should not otherwise limit or restrict the authority of state regulatory authorities to have access to the books and records of and audit the operations of jurisdictional utilities.

5. Any entity required to provide access to its books and records should make arrangements as necessary and appropriate to ensure that competitively sensitive information derived therefrom be kept confidential by the regulator.

ALGONQUIN POWER & UTILITIES CORP.

COST ALLOCATION MANUAL

V2014.1 Effective: July 1st, 2015

This document outlines the methods of direct charges and cost allocations:
(i) between Algonquin Power & Utilities Corp. and its affiliates, including Algonquin Power Company and Liberty Utilities (Canada) Corp.; (ii) between Liberty Utilities (Canada) Corp. and its regulated utility subsidiaries; (iii) between Liberty Utilities (Canada) Corp.'s shared services functions and its affiliates, including Algonquin Power Company and Liberty Utilities (Canada) Corp.; and (iv) between Liberty Utilities Service Corp. and its affiliates.

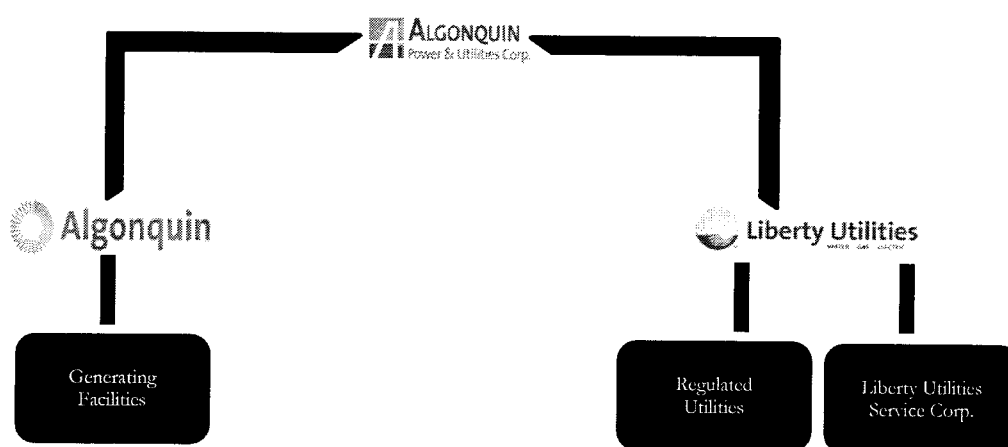
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1. INTRODUCTION

The purpose of this manual is to provide a detailed explanation of services provided by Algonquin Power & Utilities Corp (“APUC”), and its affiliates, Algonquin Power Company (“APCo”), Liberty Utilities (Canada) Corp. (“LUC”), and Liberty Utilities Service Corp. (“LUSC”) to the regulated utilities and to describe the Direct Charge¹ and Cost Allocation² Methodologies used by APUC, APCo, LUC, and LUSC. The following organization chart identifies the relationships between the separate entities.

Figure 1: Algonquin Power & Utilities Corporate Structure



This Cost Allocation Manual (“CAM”) has been completed in accordance and conformance with the *NARUC Guidelines for Cost Allocations and Affiliate Transactions* (“NARUC Guidelines”). More specifically, the founding principles of this Cost Allocation Manual are to a) directly charge as much as possible to the entity that procures any specific service, and b) to ensure that inappropriate subsidization of unregulated activities by regulated activities, and vice versa, does not occur. For ease of reference, the NARUC Guidelines are attached as Appendix 1.

¹ Direct charges (sometimes referred to as assigned costs) are costs incurred by one company for the exclusive benefit of one or more other companies, and which are directly charged (or assigned) to the company or companies that specifically benefited.

² Allocated costs are costs incurred by one company that are for the benefit of either (a) all of the Algonquin companies or (b) all of the regulated companies, and which are charged to the benefited companies using a methodology and set of logical allocation factors that establish a reasonable link between cost causation and cost recovery.

COST ALLOCATION MANUAL

Costs charged and allocated pursuant to this CAM shall include direct labor, direct materials, direct purchased services associated with the related asset or services, and overhead amounts. The direct charges are assigned as follows:

- a. Tariffed rates or other pricing mechanisms established by rate setting authorities shall be used to provide all regulated services;
- b. Services not covered by (a) shall be charged by the providing party to the receiving party at fully distributed cost; and
- c. Facilities and administrative services rendered to a rate-regulated subsidiary shall be charged on the following basis:
 - (i) the prevailing price for which the service is provided for sale to the general public by the providing party (i.e., the price charged to non-affiliates if such transactions with non-affiliates constitute a substantial portion of the providing party's total revenues from such transactions) or, if no such prevailing price exists, (ii) an amount not to exceed the fully distributed cost incurred by the providing party in providing such service to the receiving party.

2. THE APUC CORPORATE STRUCTURE

APUC's primary business is direct interest or equity ownership in renewable and thermal power generating facilities and regulated utilities. APUC owns a widely diversified portfolio of independent power production facilities³ and regulated utilities⁴ consisting of water distribution, wastewater treatment facilities, electric and gas utilities. While power production facilities are located in both Canada and the United States, regulated utility operations are exclusively in the United States. APUC is publicly traded on the Toronto Stock Exchange⁵. Its structure as a publicly traded holding company provides substantial benefits to its regulated utilities through access to capital markets.

³ All power production (i.e. generation) facilities are found within Algonquin Power Company within the APUC corporate structure.

⁴ All distribution utilities are found within Liberty Utilities (Canada) Corp. within the APUC corporate structure.

⁵ Common shares and preferred shares are traded on the Toronto Stock Exchange (TSX) under the symbols AQN, AQN.PR.A and AQN.PR.D. Additional corporate information can be found at the company's website, algonquinpower.com.

COST ALLOCATION MANUAL

APUC is the ultimate corporate parent and affiliate that provides financial, strategic management, corporate governance, administrative and support services to LUC and its subsidiaries as well as to the numerous generation assets held by APCo. The services provided by APUC are necessary for LUC and its subsidiaries to have access to capital markets for capital projects and operations. These services are expensed at APUC and are performed for the benefit of APCo and LUC and their respective businesses.

APUC and its affiliates capitalize on APUC's expertise and access to the capital markets through the use of certain shared services, which maximizes economies of scale and minimizes redundancy. In short, it provides for maximum expertise at lower costs. Further, the use of shared expertise allows each of the entities to receive a benefit they may not be able to achieve on a stand-alone basis such as strategic management advice and access to capital at more competitive rates.

3. SCOPE OF SERVICES FROM APUC AND APCO AMONG AFFILIATES AND HOW THOSE COSTS ARE DISTRIBUTED

Each distribution utility can be assigned and/or allocated costs from APUC, LUC and LUSC. This section provides an overview of the services and the cost methodology for APUC. In addition, this section also addresses any costs and services that may arise from APCo.

3.1 Labor Services and Cost Allocation from APUC to LUC and APCo

3.1.1 Description of the APUC Services and Costs

APUC provides benefits to its affiliate companies by use of certain shared services. APUC charges labor rates for these shared services at cost, which is the dollar hourly rate per employee as recorded in APUC's payroll systems, grossed up for burdens such as payroll taxes, health benefits, retirement plans, other insurance provided to employees, and other employee benefits. These labor costs are charged directly based on timesheets to the extent possible. If labor is for the benefit of all subsidiaries then the allocation methodologies used for non-labor costs are applied.

COST ALLOCATION MANUAL

APUC's non-labor services include Financing Services. As used herein Financing Services means the selling of units to public investors in order to generate the funding and capital necessary (be it short term or long term funding, including equity and debt) for LUC and APCo as well as providing legal services in connection with the issuance of public debt.

The capital and funds obtained from the sale of shares in APUC are used by LUC and APCo for current and future capital investments. The services provided by APUC are critical and necessary to LUC and APCo because without those services they would not have a readily available source of capital funding. Further, relatively small utilities may have difficulty attracting capital on a stand-alone basis.

The services provided by APUC specifically optimize the performance of the utilities, keeping rates low for customers while ensuring access to capital is available. If the utilities did not have access to the services provided by APUC, then they would be forced to incur associated costs for financing, capital investment, audits, taxes and other similar services on a stand-alone basis, which would substantially increase such costs. Simply put, without incurring these costs, APUC would not be able to invest capital in its subsidiaries, including the regulated utilities.

In connection with the provision of Financing Services, APUC incurs the following types of costs: (i) strategic management costs (board of director, third-party legal services, accounting services, tax planning and filings, insurance, and required auditing); (ii) capital access costs (communications, investor relations, trustee fees, escrow and transfer agent fees); (iii) financial control costs (audit and tax expenses); and (iv) administrative (rent, depreciation, general office costs). See Appendix 2 for a more detailed discussion of the costs incurred by APUC.

Non-labor costs, excluding corporate capital, are pooled and allocated to LUC's subsidiaries and APCo using the method summarized in Table 1. Each corporate cost type, or function, has been carefully reviewed to properly identify the factors driving those costs. Each function or cost type is typically driven by more than one factor and each has been assigned an appropriate weighting. Table 1 includes brief commentary on the rationale for each cost driver and weighting, along with examples for each cost type.

COST ALLOCATION MANUAL

Table 1: Summary of Corporate Allocation Method of APUC Indirect Costs

Type of Cost	Allocation Methodology		Rationale	Examples
Legal Costs	Net Plant	33.3%	This function is driven by factors which include Net Plant, as typically the higher the value of plant, the more legal work it attracts; similarly, a greater number of employees are typically more indicative of larger facilities that require greater levels of attention; and O&M costs tend to be a third factor indicative of size and legal complexity.	Employee labor and related administration and programs; Third party legal
	Number of Employees	33.3%		
	O&M	33.3%		
Tax Services	Revenue	33.3%	This function is driven by a variety of factors that influence the size and relative tax complexity, including Revenues, O&M and Net Plant. Tax activity can be driven by each of these factors.	Employee labor and related administration and programs, including Third party tax advice and services
	O&M	33.3%		
	Net Plant	33.3%		
Audit	Revenue	33.3%	This function is driven by a variety of factors that influence the size	Employee labor and related administration and programs,
	O&M	33.3%		
	Net Plant	33.3%		

COST ALLOCATION MANUAL

			and complexity of Audit, including Revenues, O&M and Net Plant. Audit activity can be driven by each of these factors.	including Third party accounting and audit services
Investor Relations	Revenue 33.3% O&M 33.3% Net Plant 33.3%		This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration and programs, including third party Investor day communications and materials
Director Fees and Insurance	Revenue 33.3% O&M 33.3% Net Plant 33.3%		This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Board of Director fees, insurance and administration
Licenses, Fees and Permits	Revenue 33.3% O&M 33.3% Net Plant 33.3%		This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs
Escrow and Transfer Agent Fees	Revenue 33.3% O&M 33.3% Net Plant 33.3%		This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs

COST ALLOCATION MANUAL

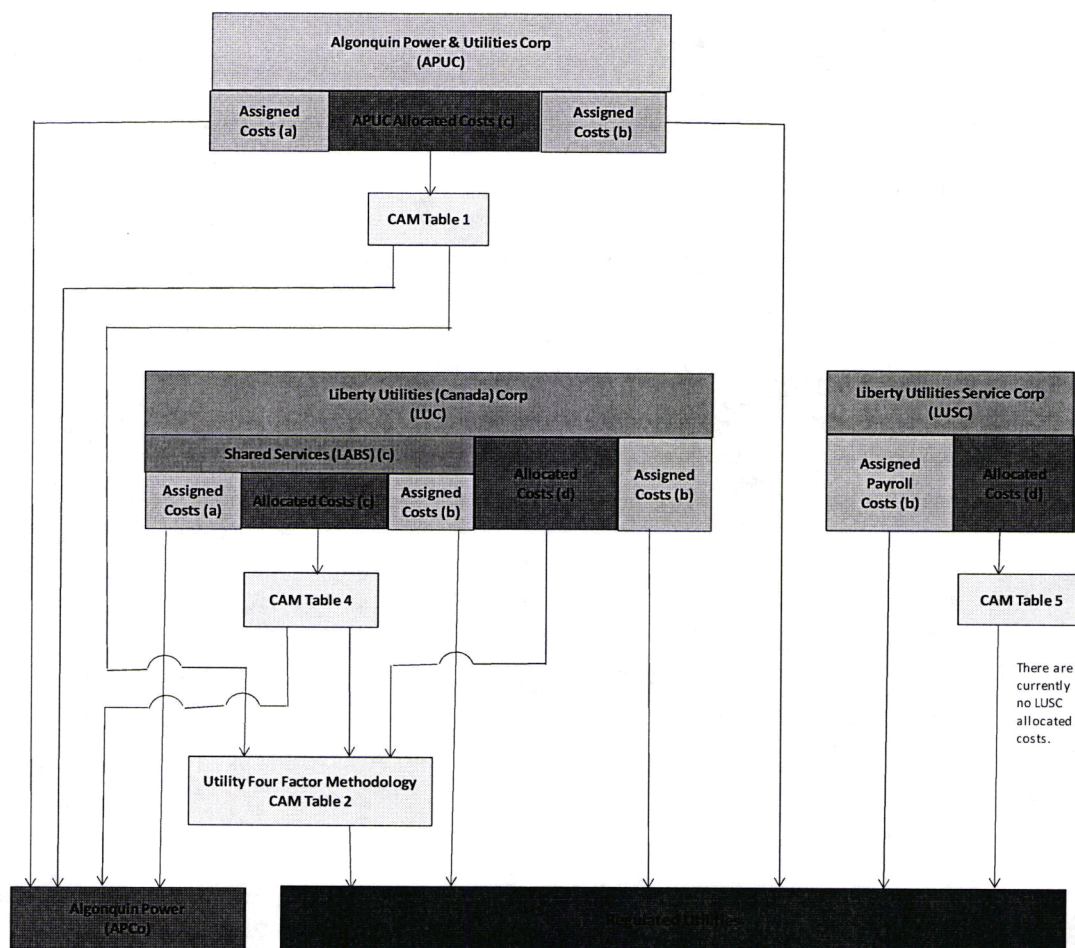
Other Professional Services	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs
Office Administration	Oakville Employees 50% Square Footage 50%	This function is driven by factors which are indicative of number of employees and square footage utilized by these employees.	Office space and utility costs. Employee labor and related administration
Executives	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor cost that is not directly attributable to any entity

Notwithstanding the above, if a charge is related either solely to the regulated utility business, i.e., LUC, or to the power generation business, i.e., APCo, then all of those costs will be direct charged, or assigned, to the business segment for which they are incurred.

Lastly, if a cost can be directly attributable to a specific entity, it will be directly charged to that entity.

3.1.2 Description of the APUC Cost Flows

Please refer to Figure 2 for a diagram of the various flows of costs that may arise from each affiliate, including APUC.

Figure 2: Illustration of APUC Corporate Cost Distributions

- (a) Costs that are directly assignable to unregulated companies
- (b) Costs that are directly assignable to regulated companies
- (c) Costs that benefit both unregulated and regulated operations
- (d) Costs that benefit all regulated operations

As illustrated in Figure 2 and as described above, APUC incurs three types of costs that are passed on to its direct and indirect subsidiaries. The first type is APUC's costs that directly benefit a particular specific unregulated company, which are directly assigned to that unregulated company. The second type is APUC's costs that directly benefit a particular regulated company, which are directly assigned to that regulated company. The third type are APUC's remaining costs that benefit the entire enterprise (both regulated and unregulated), which are allocated between regulated and unregulated company groups pursuant to CAM Table 1. Information within Table 1 includes: (a) each type of cost incurred by APUC that is to be allocated between regulated and unregulated parts of the business; (b) the factors used to allocate each type of cost between regulated and unregulated activity; (c)

the rationale for selecting the factors that are used for allocation; and (d) examples of the specific allocated costs. The costs allocated to the regulated companies as a group are then reallocated to individual companies using the Utility Four-Factor allocation methodology set forth in CAM Table 2 (described below), resulting in utility-specific allocated charges from APUC.

For an example of how an APUC invoice would be assigned or allocated, please see Appendix 3.

Certain costs, which are incurred for the benefit of APUC's businesses, are not allocated to any subsidiary. These include costs such as certain corporate travel and certain overheads.

3.2 Labor Services and Cost Allocation From APCo To LUC

From time to time, APCo may provide Engineering and Technical Labor to LUC or its utilities. These charges plus an allocation for corporate overheads such as rent, materials/supplies, etc. are capitalized and directly charged to the relevant utility.

From time to time, APCo employees may provide administrative support to LUC or its utilities. These charges are direct charged using time sheets.

4. SCOPE OF SERVICES PROVIDED BY LUC TO ITS SUBSIDIARIES, APUC AND APCO, AND HOW THOSE COSTS ARE DISTRIBUTED

Each distribution utility can be assigned and/or allocated costs from APUC, LUC and LUSC. This section provides an overview of the services and the cost methodology for LUC.

4.1 Overview of LUC Services and Costs

Please refer to Figure 2 for a diagram of the various flows of costs that may arise from each affiliate, including LUC.

As illustrated in Figure 2, LUC incurs three types of costs that are passed on to other direct or indirect subsidiaries. The first type is an LUC cost that directly benefits a particular regulated company, which is directly assigned to that regulated

company. The second type is an LUC cost that benefits all of the regulated companies, which is allocated using the Utility Four-Factor Methodology described in CAM Table 2. Both of these cost types are described in section 4.2 below.

The third type of costs arising from LUC are those from shared services⁶ that benefit both the regulated group of companies and the unregulated group of companies within the Liberty / Algonquin family, which are allocated between the two groups pursuant to the methodology described in section 4.3 and as set forth in CAM Table 4.

4.2 LUC Services and Costs Provided to Utilities

LUC provides its regulated utilities with the following services: accounting, administration, corporate finance, human resources (including training and development), information technology, rates and regulatory affairs, environment, health, safety, and security, customer service, procurement, risk management, legal, and utility planning. The following are examples of some of the services provided: (i) budgeting, forecasting, and financial reporting services including preparation of reports and preservation of records, cash management (including electronic fund transfers, cash receipts processing, managing short-term borrowings and investments with third parties); (ii) development of customer service policies and procedures; (iii) development of human resource policies and procedures; (iv) selection of information systems and equipment for accounting, engineering, administration, customer service, emergency restoration and other functions and implementation thereof; (v) development, placement and administration of insurance coverages and employee benefit programs, including group insurance and retirement annuities, property inspections and valuations for insurance; (vi) purchasing services including preparation and analysis of product specifications, requests for proposals and similar solicitations; and vendor and vendor-product evaluations; (vii) energy procurement oversight and load forecasting; and (viii) development of regulatory strategy.

LUC will assign costs that can be directly attributable to a specific utility. These include direct labor and direct non-labor costs. However, the indirect LUC costs cannot be directly attributed to an individual utility. LUC allocates its indirect

⁶ As discussed later, LUC costs that benefit both regulated and unregulated businesses are incurred within Liberty Algonquin Business Services ("LABS"), which is a business unit within LUC that serves both regulated and unregulated entities.

COST ALLOCATION MANUAL

labor and indirect non-labor costs, including capital costs, to its regulated utilities using a Utility Four-Factor Methodology. LUC uses the Utility Four-Factor Methodology to allocate costs incurred for the benefit of all of its regulated assets (“System-Wide Costs”) to all of its utilities.

The Utility Four-Factor Methodology allocates costs by relative size of the utilities. The methodology used by LUC involves four allocating factors, or drivers: (1) Utility Plant; (2) Total Customers; (3) Non-Labor Expenses; and (4) Labor, with each factor assigned an equal weight, as shown in Table 2 below.

Table 2: Utility Four-Factor Methodology Factors and Weightings

Factor	Weight
Utility Plant	25%
Customer Count	25%
Non-Labor Expenses	25%
Labor	25%
Total	100%

LUC also uses the Utility Four-Factor Methodology to allocate to its regulated utilities the system-wide indirect labor and indirect non-labor costs allocated to LUC from APUC.

Table 3 provides a simplified hypothetical example to demonstrate how the Utility Four-Factor Methodology would be calculated based on ownership of only two hypothetical utilities.

Table 3: Utility Four-Factor Methodology Example

Factor	Utility 1	Utility 2	Total All Utilities	Utility 1 % of Total	Factor Weight	Utility 1 Allocation
Utility Plant (\$)	727	371	1098	66%	25%	17%
Customer Count (#)	6000	1000	7000	86%	25%	21%
Labor (\$)	57	32	89	64%	25%	16%
Non-Labor Expenses (\$)	108	41	149	72%	25%	18%
Total Allocation						72%

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As can be seen from these hypothetical numbers in Table 3, Utility 1 would be allocated 72% of the total indirect costs incurred by LUC, based on its relative size and application of the Utility Four-Factor Methodology. Utility 2 would be allocated the remaining 28%. LUC has developed and utilized this methodology to better allocate costs, recognizing that larger utilities require more time and management attention and incur greater costs than smaller ones.

On occasion there may be costs which are incurred for the benefit of two or more utilities, but not all of the utilities. These costs are directly assigned to utilities as per the vendor invoice, or, if the invoice doesn't specify a share for each utility, the Utility Four-Factor Methodology is used. In this situation, the weighting is determined by only including the utilities that benefited from the service and excluding the utilities that did not receive the service.

For an example of how an LUC invoice would be assigned or allocated, please see Appendix 4.

4.3 Shared Services from LUC

The third type of costs arising from LUC are those from shared services⁷ that benefit both the regulated group of companies and the unregulated group of companies within the Liberty / Algonquin family.

Consistent with the organization practices described earlier, shared services and costs (within LUC) are assigned when they are directly attributable to a specific business unit⁸. Labor charges for LUC shared services staff are assigned using time sheets that depict the amount of time that is to be direct charged to either LUC or APCo.

Indirect costs for services from the shared services functions that cannot be directly assigned are allocated between the regulated and unregulated business units, LUC and APCo, pursuant to the methodology set forth in CAM Tables 4a and 4b. Similar to Table 1, Tables 4a and 4b include: (a) each type of cost incurred by LUC that is to be allocated between regulated and unregulated parts of the business; (b) the factors used to allocate each type of cost between regulated and

⁷ Liberty Algonquin Business Services ("LABS") is a business unit found organizationally within LUC that serves both regulated and unregulated entities.

⁸ To clarify, if a LABS service is for only one specific organization, such as the unregulated generation business, APCo, the cost will be directly charged to that business unit.

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unregulated activity; (c) the rationale for selecting the factors that are used for allocation; and (d) examples of the specific allocated costs. The costs allocated to the regulated companies as a group are then reallocated to individual companies using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUC.

For an example of how an invoice or cost within LUC's shared services (LABS) would be assigned or allocated, please see Appendix 5.

4.3.1 Business Services and Corporate Services

LUC shared services that benefit the entire company, i.e., APCo and LUC, are internally referenced under two names - Business Services and Corporate Services. The services and functions within each category are shown in the tables below⁹. Indirect costs from Business Services and Corporate Services are allocated using the following methodology shown in Tables 4a and 4b, respectively, which are designed to closely align the costs with the driver of the activity.

Table 4a: Summary of Corporate Allocation Method of LUC Business Services Indirect Costs

Type of Cost	Allocation Methodology		Rationale	Examples
Information Technology	Number of Employees	90%	IT function is driven by factors which include number of employees and O&M. The larger the number of employees, the more support, software and IT infrastructure is required.	Enterprise wide support, architecture, etc. Third party fees
	O&M	10%		

⁹ Note that the shared service functions found in Tables 4a and 4b are unchanged from those shown in Table 4 in the prior version of the CAM. These functions have simply been reorganized into these two Tables, 4a and 4b, to show the differentiation between Business Services and Corporate Services.

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Human Resources	Number of Employees 100%	HR function is driven by number of employees. A greater number of employees requires additional HR support	HR policies, payroll processing, benefits, employee surveys
Training	Number of Employees 100%	Training is directly proportional to the number of employees per function	Courses, lectures, in house training sessions by third party providers
Facilities and Building Rent	Square Footage 100%	Office space occupied accurately reflects space requirements of each subsidiary	Corporate office building
Environment, Health, Safety and Security	Number of Employees 100%	EHSS training, etc. is directly proportional to the number of employees per function	Enterprise wide programs, employee labor and related administration
Procurement	O&M 50% Capital Expenditures 50%	Procurement function is based on typical proportion of expenditures	Enterprise wide support and related administration

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Table 4b: Summary of Corporate Allocation Method of LUC Corporate Services Indirect Costs

Risk Management	Net Plant Revenue O&M	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and complexity of Risk Management - Revenues, Net Plant and O&M costs.	Software platform, fees and administration
Financial Reporting and Administration	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and complexity of Financial Reporting and Admin. - Revenues, Net Plant and O&M costs.	Employee labor and related administration and third party fees
Treasury	Capital Expenditures O&M Net Plant	25% 50% 25%	Treasury activity is typically guided by the amount of necessary capex/plant for each utility, and operating costs/cash flow	Third party financing, employee labor and related administration and programs
Internal Audit	Net Plant O&M	25% 75%	This function is driven by factors which reflect the relative size and complexity of Internal audit activity. Larger Plant and operating costs drive of a given facility drive	Third party fees, employee labor and related administration and programs

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			more activity from IA.	
Communications	Number of Employees	100%	Communications cost is directly proportional to the number of employees	Enterprise wide support and related administration
Legal Costs	Net Plant Number of Employees O&M	33.3% 33.3% 33.3%	This function is driven by factors which include Net Plant, as typically the higher the value of plant, the more legal work it attracts; similarly, a greater number of employees are typically more indicative of larger facilities that require greater levels of attention; and O&M costs tend to be a third factor indicative of size and legal complexity.	Employee labor and related administration and programs, including third party legal

5. LIBERTY UTILITIES SERVICE CORP.

Each distribution utility can be assigned and/or allocated costs from APUC, LUC and LUSC. This section provides an overview of the services and the cost methodology for LUSC.

All U.S.-based utility employees are employed, or will be employed, by Liberty Utilities Service Corp. (LUSC). All employees' costs, such as salaries, benefits, insurances etc. are to be paid by LUSC and direct charged to the company to which the employee is dedicated and performs work. Services provided from

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LUSC to each regulated utility shall be done on a time sheet basis to the extent possible. In infrequent instances where time sheeting may not be possible, the allocation factors shown in Table 5 are to be used.

Table 5: Summary of Allocation Method of LUSC Indirect Costs

Type of Cost	Allocation Methodology		Rationale	Examples
Customer Care and Billing	Customer count	100%	Customer count accurately reflects the resource requirements of the Customer Care and Billing group	Customer Care and Billing employees and related administrations
IT/Tech Support	Number of Employees	100%	Technical support requirements are related to the number of employees	Tech support staff, associated administration, and required software, hardware, etc.
Human Resources	Number of Employees	100%	HR function is driven by number of employees. A greater number of employees requires additional HR support	HR policies, payroll processing, benefits, employee surveys
Gas Control	Net Plant	100%	The greater the plant, the more control required	Gas Control labor, administration, and associated programs
Legal	Net Plant Number of Employees O&M	33.3% 33.3% 33.3%	Allocated based on the relative size of affiliate and employee count.	Employee labor and related administration and programs, including third party legal

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Regulatory	Net Plant Number of Employees O&M	33.3% 33.3% 33.3%	Allocated based on the relative size of affiliate and employee count.	Utility-wide studies or third party costs beneficial to all utilities
Environment, Health, Safety and Security	Number of Employees	100%	EHSS training, etc. is directly proportional to the number of employees	Utility-wide programs, employee labor and related administration
Procurement	O&M Capital Expenditures	50% 50%	Based on typical proportion of expenditures	Utility-wide support and related administration

Please note the allocation methodology can be adjusted based on the number of participating utilities. For example, Customer Service representatives who serve only the New Hampshire utilities will only have their indirect costs allocated, if any, based on the number of customers within New Hampshire. Labor costs associated with energy procurement are directly billed to the utilities requiring energy procurement services using timesheets.

6. CORPORATE CAPITAL

APUC or LUC will make capital investments for the benefit of all the utilities or facilities it owns (examples include corporate headquarters, IT systems, etc.). All capital investments kept at the corporate level benefiting all facilities will be distributed monthly in the form of an intercompany operating expense charge that captures the depreciation expense and cost of capital associated with the assets. All costs associated to service the investment will be allocated to APCo and LUC's utilities based on that department's allocation where the capital investment is made. For example, if the capital investment is made in Human Resources then the allocation methodology used for Human Resources to allocate non-capital indirect costs as shown in Table 4a will be used to allocate the charge associated with the corporate capital expenditures, including the cost of capital, depreciation, property tax, operation and maintenance costs and all other associated costs. Any corporate capital charges allocated to LUC are then reallocated to individual companies using the Utility Four-Factor Methodology set forth in CAM Table 2.

7. UPDATING ALLOCATIONS

Allocation percentages¹⁰ are updated annually. These annual updates to the allocation percentages are based on the most recent audited financial statements and other actual, year-end information. The updated percentages come into effect each April 1st and are valid through to the following March 31st. These allocations percentages are also updated if an entity is either acquired or sold.

8. CAM TRAINING

The oversight of the CAM is currently the responsibility of the corporate Regulatory department. Any updates or revisions are coordinated and completed by this group. The CAM, and any support material, is distributed to Finance and Regulatory staff throughout the organization at least annually. Any revisions to the CAM are distributed immediately upon finalization to this same audience. Training sessions are conducted annually to Finance, Regulatory and other affected departments. As part of the employee orientation program, new employees receive an introduction to the CAM. Further enhancements and additions to this employee training program to foster and enhance the organization's understanding of the CAM are ongoing. For example, it is anticipated that an online training module will be created and deployed across the organization, supplemented by a self-certification process.

¹⁰ To clarify, the factors and weightings are expected to remain constant. It is the underlying information used to calculate the allocation percentages that is updated annually, such as the most recent net plant figures, or the most recent numbers of employees, for example.

9. APPENDICES

APPENDIX 1 - NARUC GUIDELINES FOR COST ALLOCATIONS

Guidelines for Cost Allocations and Affiliate Transactions:

The following Guidelines for Cost Allocations and Affiliate Transactions (Guidelines) are intended to provide guidance to jurisdictional regulatory authorities and regulated utilities and their affiliates in the development of procedures and recording of transactions for services and products between a regulated entity and affiliates. The prevailing premise of these Guidelines is that allocation methods should not result in subsidization of non-regulated services or products by regulated entities unless authorized by the jurisdictional regulatory authority. These Guidelines are not intended to be rules or regulations prescribing how cost allocations and affiliate transactions are to be handled. They are intended to provide a framework for regulated entities and regulatory authorities in the development of their own policies and procedures for cost allocations and affiliated transactions. Variation in regulatory environment may justify different cost allocation methods than those embodied in the Guidelines.

The Guidelines acknowledge and reference the use of several different practices and methods. It is intended that there be latitude in the application of these guidelines, subject to regulatory oversight. The implementation and compliance with these cost allocations and affiliate transaction guidelines, by regulated utilities under the authority of jurisdictional regulatory commissions, is subject to Federal and state law. Each state or Federal regulatory commission may have unique situations and circumstances that govern affiliate transactions, cost allocations, and/or service or product pricing standards. For example, The Public Utility Holding Company Act of 1935 requires registered holding company systems to price "at cost" the sale of goods and services and the undertaking of construction contracts between affiliate companies.

The Guidelines were developed by the NARUC Staff Subcommittee on Accounts in compliance with the Resolution passed on March 3, 1998 entitled "Resolution Regarding Cost Allocation for the Energy Industry" which directed the Staff Subcommittee on Accounts together with the Staff Subcommittees on Strategic Issues and Gas to prepare for NARUC's consideration, "Guidelines for Energy Cost Allocations." In addition, input was requested from other industry parties.

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Various levels of input were obtained in the development of the Guidelines from the Edison Electric Institute, American Gas Association, Securities and Exchange Commission, the Federal Energy Regulatory Commission, Rural Utilities Service and the National Rural Electric Cooperatives Association as well as staff of various state public utility commissions.

In some instances, non-structural safeguards as contained in these guidelines may not be sufficient to prevent market power problems in strategic markets such as the generation market. Problems arise when a firm has the ability to raise prices above market for a sustained period and/or impede output of a product or service. Such concerns have led some states to develop codes of conduct to govern relationships between the regulated utility and its non-regulated affiliates. Consideration should be given to any "unique" advantages an incumbent utility would have over competitors in an emerging market such as the retail energy market. A code of conduct should be used in conjunction with guidelines on cost allocations and affiliate transactions.

A. DEFINITIONS

1. Affiliates - companies that are related to each other due to common ownership or control.
2. Attestation Engagement - one in which a certified public accountant who is in the practice of public accounting is contracted to issue a written communication that expresses a conclusion about the reliability of a written assertion that is the responsibility of another party.
3. Cost Allocation Manual (CAM) - an indexed compilation and documentation of a company's cost allocation policies and related procedures.
4. Cost Allocations - the methods or ratios used to apportion costs. A cost allocator can be based on the origin of costs, as in the case of cost drivers; cost-causative linkage of an indirect nature; or one or more overall factors (also known as general allocators).
5. Common Costs - costs associated with services or products that are of joint benefit between regulated and non-regulated business units.
6. Cost Driver - a measurable event or quantity which influences the level of costs incurred and which can be directly traced to the origin of the costs themselves.

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7. Direct Costs - costs which can be specifically identified with a particular service or product.
8. Fully Allocated costs - the sum of the direct costs plus an appropriate share of indirect costs.
9. Incremental pricing - pricing services or products on a basis of only the additional costs added by their operations while one or more pre-existing services or products support the fixed costs.
10. Indirect Costs - costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative and general, and taxes.
11. Non-regulated - that which is not subject to regulation by regulatory authorities.
12. Prevailing Market Pricing - a generally accepted market value that can be substantiated by clearly comparable transactions, auction or appraisal.
13. Regulated - that which is subject to regulation by regulatory authorities.
14. Subsidization - the recovery of costs from one class of customers or business unit that are attributable to another.

B. COST ALLOCATION PRINCIPLES

The following allocation principles should be used whenever products or services are provided between a regulated utility and its non-regulated affiliate or division.

1. To the maximum extent practicable, in consideration of administrative costs, costs should be collected and classified on a direct basis for each asset, service or product provided.
2. The general method for charging indirect costs should be on a fully allocated cost basis. Under appropriate circumstances, regulatory authorities may consider incremental cost, prevailing market pricing or other methods for allocating costs and pricing transactions among affiliates.

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3. To the extent possible, all direct and allocated costs between regulated and non-regulated services and products should be traceable on the books of the applicable regulated utility to the applicable Uniform System of Accounts. Documentation should be made available to the appropriate regulatory authority upon request regarding transactions between the regulated utility and its affiliates.
4. The allocation methods should apply to the regulated entity's affiliates in order to prevent subsidization from, and ensure equitable cost sharing among the regulated entity and its affiliates, and vice versa.
5. All costs should be classified to services or products which, by their very nature, are either regulated, non-regulated, or common to both.
6. The primary cost driver of common costs, or a relevant proxy in the absence of a primary cost driver, should be identified and used to allocate the cost between regulated and non-regulated services or products.
7. The indirect costs of each business unit, including the allocated costs of shared services, should be spread to the services or products to which they relate using relevant cost allocators.

C. COST ALLOCATION MANUAL (NOT TARIFFED)

Each entity that provides both regulated and non-regulated services or products should maintain a cost allocation manual (CAM) or its equivalent and notify the jurisdictional regulatory authorities of the CAM's existence. The determination of what, if any, information should be held confidential should be based on the statutes and rules of the regulatory agency that requires the information. Any entity required to provide notification of a CAM(s) should make arrangements as necessary and appropriate to ensure competitively sensitive information derived therefrom be kept confidential by the regulator. At a minimum, the CAM should contain the following:

1. An organization chart of the holding company, depicting all affiliates, and regulated entities.
2. A description of all assets, services and products provided to and from the regulated entity and each of its affiliates.

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3. A description of all assets, services and products provided by the regulated entity to non-affiliates.
4. A description of the cost allocators and methods used by the regulated entity and the cost allocators and methods used by its affiliates related to the regulated services and products provided to the regulated entity.

D. AFFILIATE TRANSACTIONS (NOT TARIFFED)

The affiliate transactions pricing guidelines are based on two assumptions. First, affiliate transactions raise the concern of self-dealing where market forces do not necessarily drive prices. Second, utilities have a natural business incentive to shift costs from non-regulated competitive operations to regulated monopoly operations since recovery is more certain with captive ratepayers. Too much flexibility will lead to subsidization. However, if the affiliate transaction pricing guidelines are too rigid, economic transactions may be discouraged.

The objective of the affiliate transactions' guidelines is to lessen the possibility of subsidization in order to protect monopoly ratepayers and to help establish and preserve competition in the electric generation and the electric and gas supply markets. It provides ample flexibility to accommodate exceptions where the outcome is in the best interest of the utility, its ratepayers and competition. As with any transactions, the burden of proof for any exception from the general rule rests with the proponent of the exception.

1. Generally, the price for services, products and the use of assets provided by a regulated entity to its non-regulated affiliates should be at the higher of fully allocated costs or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.
2. Generally, the price for services, products and the use of assets provided by a non-regulated affiliate to a regulated affiliate should be at the lower of fully allocated cost or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.
3. Generally, transfer of a capital asset from the utility to its non-regulated affiliate should be at the greater of prevailing market price or net book value, except as

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otherwise required by law or regulation. Generally, transfer of assets from an affiliate to the utility should be at the lower of prevailing market price or net book value, except as otherwise required by law or regulation. To determine prevailing market value, an appraisal should be required at certain value thresholds as determined by regulators.

4. Entities should maintain all information underlying affiliate transactions with the affiliated utility for a minimum of three years, or as required by law or regulation.

E. AUDIT REQUIREMENTS

1. An audit trail should exist with respect to all transactions between the regulated entity and its affiliates that relate to regulated services and products. The regulator should have complete access to all affiliate records necessary to ensure that cost allocations and affiliate transactions are conducted in accordance with the guidelines. Regulators should have complete access to affiliate records, consistent with state statutes, to ensure that the regulator has access to all relevant information necessary to evaluate whether subsidization exists. The auditors, not the audited utilities, should determine what information is relevant for a particular audit objective. Limitations on access would compromise the audit process and impair audit independence.

2. Each regulated entity's cost allocation documentation should be made available to the company's internal auditors for periodic review of the allocation policy and process and to any jurisdictional regulatory authority when appropriate and upon request.

3. Any jurisdictional regulatory authority may request an independent attestation engagement of the CAM. The cost of any independent attestation engagement associated with the CAM, should be shared between regulated and non-regulated operations consistent with the allocation of similar common costs.

4. Any audit of the CAM should not otherwise limit or restrict the authority of state regulatory authorities to have access to the books and records of and audit the operations of jurisdictional utilities.

5. Any entity required to provide access to its books and records should make arrangements as necessary and appropriate to ensure that competitively sensitive information derived therefrom be kept confidential by the regulator.

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F. REPORTING REQUIREMENTS

1. The regulated entity should report annually the dollar amount of non-tariffed transactions associated with the provision of each service or product and the use or sale of each asset for the following:

- a. Those provided to each non-regulated affiliate.
- b. Those received from each non-regulated affiliate.
- c. Those provided to non-affiliated entities.

2. Any additional information needed to assure compliance with these Guidelines, such as cost of service data necessary to evaluate subsidization issues, should be provided.

Source:

<http://www.naruc.org/Publications/Guidelines%20for%20Cost%20Allocations%20and%20Affiliate%20Transactions.pdf>

APPENDIX 2 – DETAILED EXPLANATION OF APUC COSTS

1. APUC STRATEGIC MANAGEMENT COSTS

Strategic management decisions are critical for any public utility. The need for strategic management is even more pronounced for APUC as a publicly traded company, which depends on access to capital funding through public sales of units. APUC seeks to hire talented strategic managers that aid in running each facility owned by the company as efficiently and effectively as possible. This ensures the long term health of each utility and ensures that rates are kept as low as possible without compromising the level of service. It also facilitates each regulated utility's access to necessary capital funding at reduced costs. The costs included in Strategic Management Costs fall into the following categories.

a. Board of Directors

The Board of Directors provides strategic oversight on all company affairs including high level approvals of strategy, operation and maintenance budgets, capital budgets, etc. In addition, the Board of Directors provides corporate governance and ensures that capital and costs are incurred prudently, which ultimately protects ratepayers.

b. General Legal Services

General legal services involve legal matters not specific to any single facility, including review of audited financial statements, annual information filings, Sedar filings, review of contracts with credit facilities, incorporation, tax issues of a legal nature, market compliance, and other similar legal costs. These legal services are required in order for APUC to provide capital funding to individual utilities, without which the utilities could not provide adequate service. Additionally, the services ensure that APUC's subsidiaries remain compliant in all aspects of operations and prevent those entities from being exposed to unnecessary risks.

c. Professional Services

Professional Services including strategic plan reviews, capital market advisory services, ERP System maintenance, benefits consulting, and other similar professional services. By providing these services at a parent level, the subsidiaries are able to benefit from economies of scale. Additionally, some of these services improve APUC's access to capital which benefits all of its subsidiaries.

2. ACCESS TO CAPITAL MARKETS

One of APUC's primary functions is to ensure its subsidiaries have access to quality capital. APUC is listed on the Toronto Stock Exchange, a leading financial market. In order to allow its subsidiaries to have continued access to those capital markets, APUC incurs the following costs. These services and costs are a prerequisite to the subsidiaries continued access to those capital markets.

a. License and Permit Fees

In connection with APUC's participation in the Toronto Stock Exchange, APUC incurs certain license and permit fees such as Sedar fees, annual filing fees, licensing fees, etc. These licensing and permit fees are required in order to sell units on the Toronto Stock Exchange, which in turn provides funding for utility operations.

b. Escrow Fees

In connection with the payment of dividends to unit holders, APUC incurs escrow fees. Escrow fees are incurred to ensure continued access to capital and ensure continuing and ongoing investments by shareholders. Without such escrow fees, APUC's subsidiaries would not have a readily available source of capital funding.

c. Unit Holder Communications

Unit holder communication costs are incurred to comply with filing and regulatory requirements of the Toronto Stock Exchange and meet the expectations of shareholders. These costs include items such as news releases and unit holder conference calls. In the absence of shareholder communication costs, investors would not invest in the units of APUC, and in turn, APUC would not have capital to invest in its subsidiaries. With such communications services, the subsidiaries would not have a readily available source of capital funding.

3. APUC FINANCIAL CONTROLS

Financial control costs incurred by APUC include costs for audit services and tax services. These costs are necessary to ensure that the subsidiaries are operating in a manner that meets audit standards and regulatory requirements, which have strong financial and operational controls, and financial transactions are recorded

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accurately and prudently. Without these services, the regulated utilities would not have a readily available source of capital funding.

a. Audit Fees

Audits are done on a yearly basis and reviews are performed quarterly on all facilities owned by APUC on an aggregate level. These corporate parent level audits reduce the cost of the stand-alone audits significantly for utilities which must perform its own separate audits. Where stand-alone audits are not required, ratepayers receive benefits of additional financial rigor, as well as access to capital, and financial soundness checks by third parties. Finally, during rate cases, the existence of audits provides staff and intervenors additional reliance on the company records, thus reducing overall rate case costs. The aggregate audit is necessary for the regulated utilities to have continued access to capital markets and unit holders.

b. Tax Services

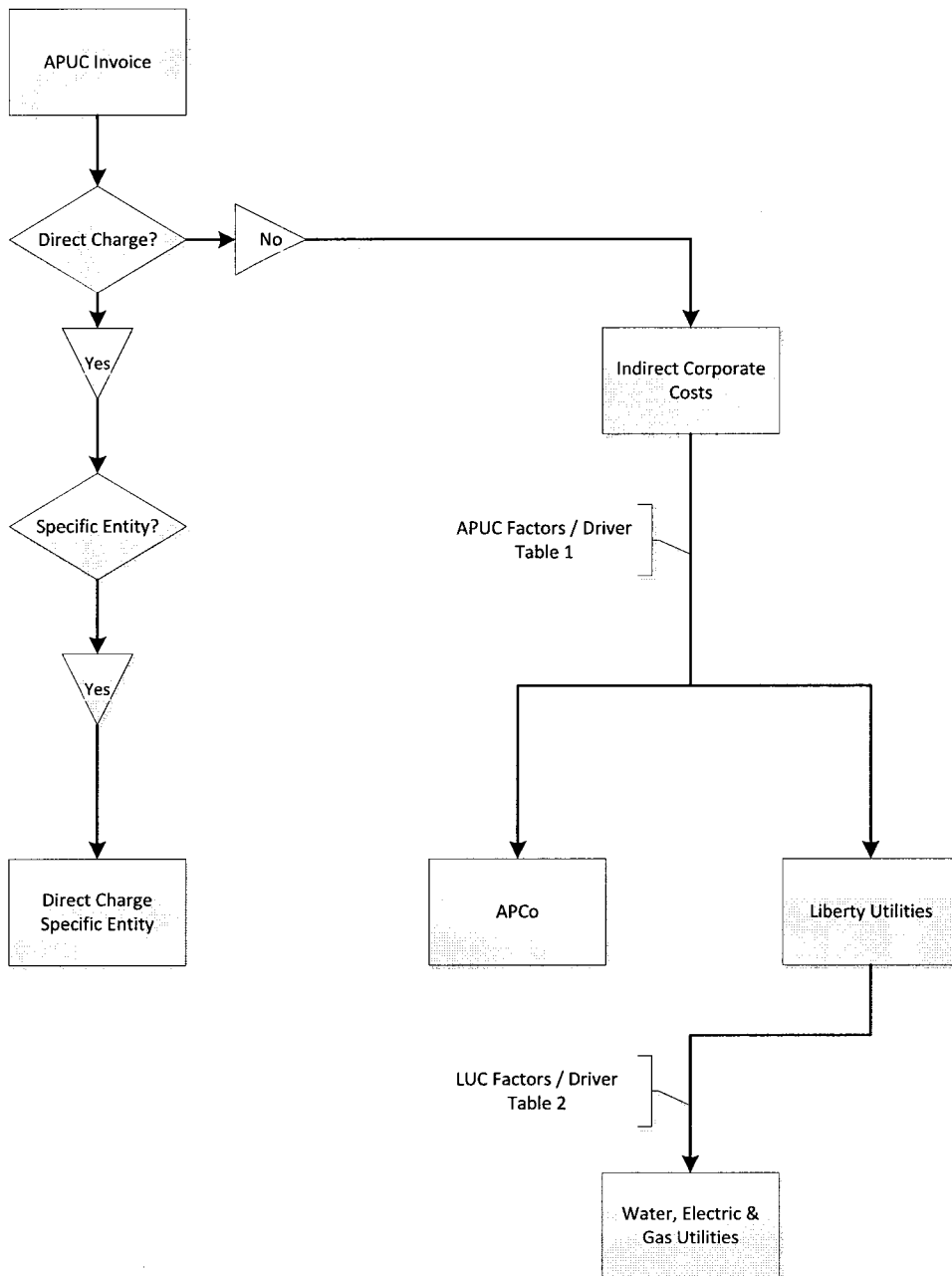
Taxes are paid on behalf of the regulated utilities at the parent level as part of a consolidated United States tax return. Tax services such as planning and filing are provided by third parties. Filing tax returns on a consolidated basis benefits each regulated utility by reducing the costs that otherwise would be incurred by such utility in filing its own separate tax return.

4. APUC ADMINISTRATIVE COSTS

Finally, administrative costs incurred by APUC such as rent, depreciation of office furniture, depreciation of computers, and general office costs are required to house all the services mentioned above. Without these administrative costs, the employees of APUC could not perform their work and provide the necessary services to the regulated utilities. These administrative costs also include training for corporate employees.

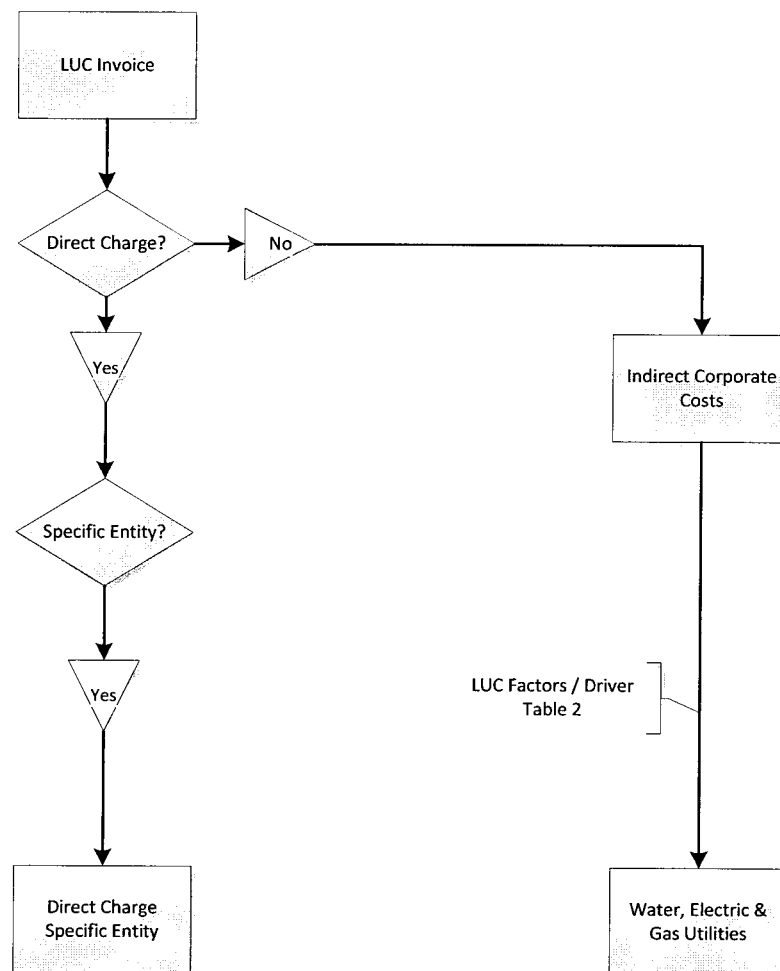
APPENDIX 3 – LIFE OF AN APUC INVOICE

A schematic is provided below showing the trail of an invoice received by APUC for services to be charged to its subsidiaries. The schematic is intended to visually explain the distribution of charges from APUC to APCo and Liberty Utilities companies.



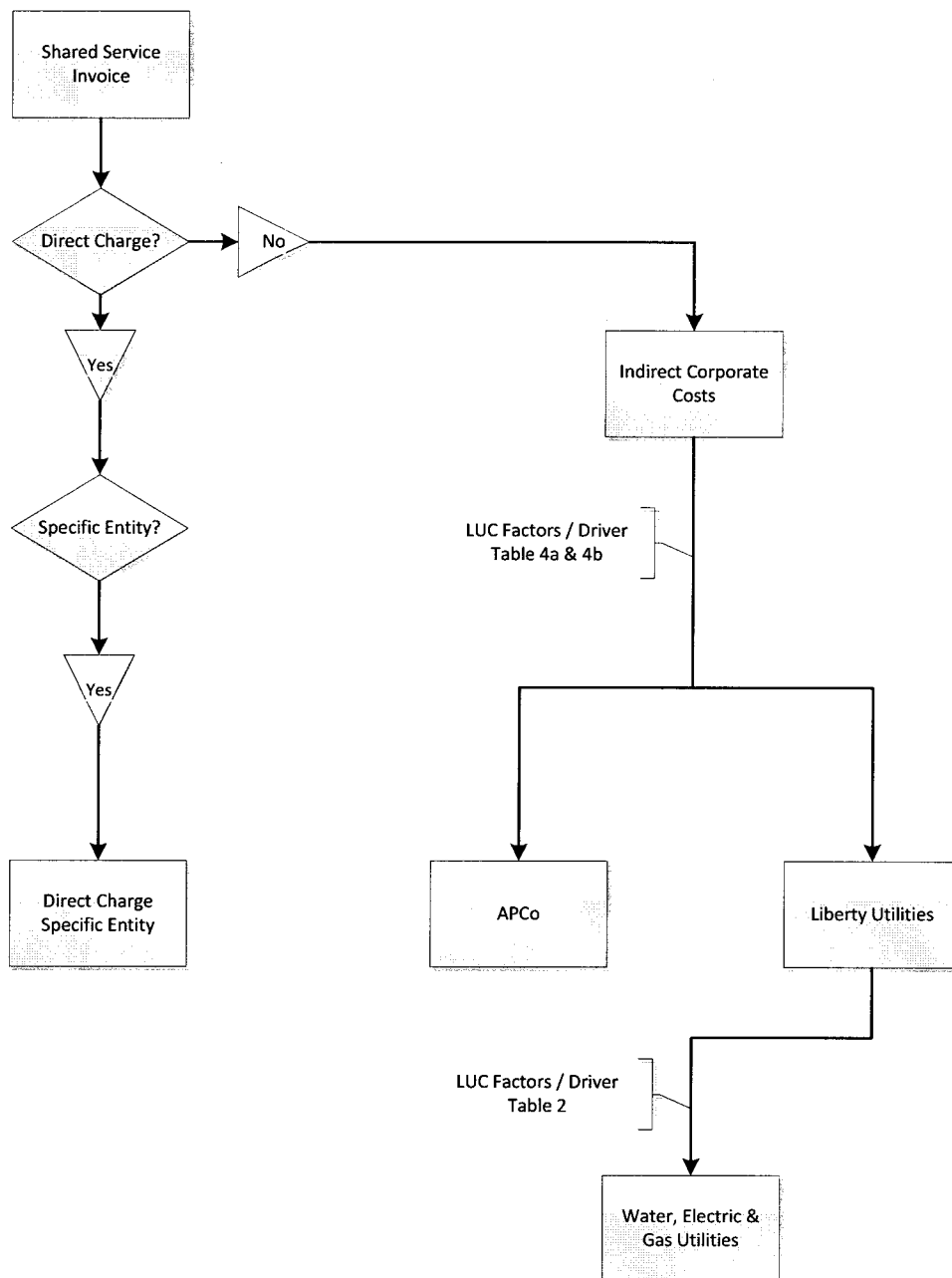
APPENDIX 4 – LIFE OF A LIBERTY UTILITIES INVOICE

A schematic is provided below showing the trail of an invoice received by Liberty Utilities (LUC) for services to be charged to its subsidiaries. The schematic is intended to visually explain the distribution of charges from LUC to Liberty Utilities companies.



APPENDIX 5 – LIFE OF A SHARED SERVICES INVOICE

A schematic is provided below showing the trail of an invoice for shared services provided within Liberty Utilities for services to be charged to affiliates and subsidiaries. The schematic is intended to visually explain the distribution of charges from shared services to APCo and Liberty Utilities companies.



BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER))
CORP., AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF)
ITS UTILITY PLANTS AND PROPERTY AND)
FOR INCREASES IN ITS WATER RATES AND)
CHARGES FOR UTILITY SERVICE BASED)
THEREON.)
_____)

DOCKET NO. W-02465A-15-0367

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER))
CORP., AN ARIZONA CORPORATION, FOR)
AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$4,700,000.)
_____)

DOCKET NO. W-02465A-15-0370

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR A DETERMINATION OF THE FAIR)
VALUE OF ITS UTILITY PLANTS AND)
PROPERTY FOR INCREASES IN ITS WATER)
CHARGES FOR UTILITY SERVICE BASED)
RATES AND THEREON.)
_____)

DOCKET NO. WS-02676A-15-0368

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$8,900,000.)
_____)

DOCKET NO. WS-02676A -15-0371

DIRECT
TESTIMONY
OF
CRYSTAL S. BROWN
EXECUTIVE CONSULTANT III
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

MAY 23, 2016

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EXECUTIVE SUMMARY
LIBERTY UTILITIES (BELLA VISTA WATER) CORP. AND
LIBERTY UTILITIES (RIO RICO WATER & SEWER) CORP.
DOCKET NOS. W-02465A-15-0367, WS-02676A-15-0368,
W-02465A-15-0370 AND WS-02676A-15-0371

COST OF CAPITAL

Bella Vista

Liberty Utilities (Bella Vista Water) Corp. ("Bella Vista") proposed a 9.16 percent rate of return. Bella Vista's proposed rate of return was calculated using an 11.60 percent cost of equity, a 3.47 percent cost of debt, and a capital structure consisting of 30.0 percent debt and 70.0 percent equity. Staff recommends a 7.5 percent rate of return. Staff's recommended rate of return was calculated using a 9.30 percent cost of equity, a 3.47 percent cost of debt, and a capital structure consisting of 30.0 percent debt and 70.0 percent equity.

Rio Rico

Liberty Utilities (Rio Rico Water & Sewer) Corp. ("Rio Rico") proposed an 8.60 percent rate of return. Rio Rico's proposed rate of return was calculated using a 10.80 percent cost of equity, a 3.47 percent cost of debt, and a capital structure consisting of 30.0 percent debt and 70.0 percent equity. Staff recommends a 7.5 percent rate of return. Staff's recommended rate of return was calculated using a 9.30 percent cost of equity, a 3.47 percent cost of debt, and a capital structure consisting of 30.0 percent debt and 70.0 percent equity.

FINANCINGS

Bella Vista and Rio Rico each made separate filing requesting approval to borrow funds from Liberty Utilities Company ("Liberty Utilities") to rebalance their capital structures by replacing equity with debt. Bella Vista requests to borrow an amount not to exceed \$4,700,000 and Rio Rico requests to borrow an amount not to exceed \$8,900,000. Staff recommends approval of both applications.

1 **I. INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Crystal S. Brown. I am an Executive Consultant III employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My
5 business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Briefly describe your responsibilities as an Executive Consultant III.**

8 A. I am responsible for the examination and verification of financial and statistical information
9 included in utility rate applications and other financial matters, including performing studies
10 to estimate the cost of capital component in rate filings and developing revenue requirements.
11 In addition, I prepare written reports, testimonies, and schedules that include Staff
12 recommendations to the Commission. I am also responsible for testifying at formal hearings
13 on these matters.

14
15 **Q. Please describe your educational background and professional experience.**

16 A. I received a Bachelor of Science Degree in Business Administration from the University of
17 Arizona and a Bachelor of Science Degree in Accounting from Arizona State University.

18
19 Since joining the Commission in August 1996, I have participated in numerous rate cases and
20 other regulatory proceedings involving electric, gas, water, and wastewater utilities. I have
21 testified on matters involving regulatory accounting, auditing, and the cost of capital.
22 Additionally, I have attended utility-related seminars sponsored by the National Association
23 of Regulatory Utility Commissioners ("NARUC") on ratemaking and accounting designed to
24 provide continuing and updated education in these areas.

1 **Q. What is the scope of your testimony in this case?**

2 A. My testimony provides Staff's recommended capital structure, cost of equity, and overall rate
3 of return ("ROR") for establishing the revenue requirement for Liberty Utilities (Bella Vista
4 Water) Corp. ("Bella Vista") and Liberty Utilities (Rio Rico Water & Sewer) Corp. ("Rio
5 Rico") (collectively, the "Companies"). It also includes a review of the Companies' financing
6 applications.
7

8 **Q. Please provide a brief description of the Companies.**

9 A. Bella Vista provides water service to approximately 9,357 customers in Maricopa County,
10 Arizona. Rio Rico provides water service to approximately 6,404 customers and provides
11 wastewater service to approximately 2,046 customers in Santa Cruz County, Arizona.
12

13 *Summary of Testimony and Recommendations*

14 **Q. Briefly summarize how Staff's cost of capital testimony is organized.**

15 A. Staff's cost of capital testimony is presented in eight sections. Section I is this introduction.
16 Section II discusses the concept of weighted average cost of capital ("WACC"). Section III
17 presents Staff's cost of debt for Bella Vista and Rio Rico. Section IV discusses the concepts
18 of return on equity ("ROE") and risk. Section V presents the methods employed by Staff to
19 estimate Bella Vista and Rio Rico's ROE. Section VI presents the findings of Staff's ROE
20 analysis. Section VII discusses the financial risk and economic assessment adjustments.
21 Section VIII presents Staff's ROR recommendation.
22

23 **Q. Have you prepared any schedules in support of your cost of capital analysis?**

24 A. Yes, my supporting schedules are shown on CSB-1 to CSB-10.
25
26

1 **Q. Are you also sponsoring Staff's recommendations concerning the revenue**
2 **requirement and rate design?**

3 A. No. Staff witness Teresa Hunsaker is supporting Staff's recommendations concerning the
4 revenue requirement and rate design. In completing her responsibilities, Ms. Hunsaker
5 utilizes the capital structure, ROE, and the overall ROR recommendations that I am
6 sponsoring.

7
8 **Q. Is there a primary conceptual basis for the difference in how risk is measured by the**
9 **Companies and how risk is measured by Staff?**

10 A. Yes. The Companies follow what is called a company-specific approach to measuring risk,
11 whereas Staff follows the portfolio approach.

12
13 **Q. What is the difference between the company-specific and the portfolio approach to**
14 **measuring risk?**

15 A. The company-specific approach to measuring risk views the risk of an investment as if that
16 investment were held in isolation as opposed to being included in a portfolio of investments.
17 Under Bella Vista and Rio Rico's company-specific approach, a cost of equity ("COE") is
18 calculated and then the results of a number of company-specific risk considerations are
19 added. Under Staff's portfolio approach, the risk of an investment is viewed in the context of
20 a diversified portfolio. Company-specific risk adders are *not directly* given consideration
21 because in the capital markets such risks can be, *and are*, addressed by diversification of the
22 investor's portfolio so ratepayers *should not* be required to compensate for a risk that can be
23 reasonably, and simply, addressed through an investment tool existing in the market place.
24 That tool is "portfolio diversification."
25

1 **Q. Before discussing Staff's specific rate of return recommendations for the Companies,**
2 **please provide an overview of the approach Staff takes to developing the ROE it**
3 **utilized in quantifying Staff's recommended revenue requirement.**

4 A. First, let me say that Staff acknowledges that all models or approaches used in defining a fair
5 ROE range can have shortcomings, even if what are termed to be shortcomings are simply
6 differences of professional judgement regarding the assumptions to be made in generating
7 results from these generally accepted models. There is no perfect or absolute way to
8 determine "required return" in a constantly changing financial marketplace. As discussed in
9 greater detail later in my testimony, Staff utilizes traditionally accepted models for estimating
10 a reasonable COE range. Unlike the Companies, Staff does not attempt to quantify
11 company-specific risk factors but rather uses the portfolio approach of measuring risk.

12
13 **Q. Once the range resulting from Staff's four cost of equity models has been established,**
14 **how does Staff select a COE within that range of reasonable COEs?**

15 A. Generally, Staff believes than any ROE, or weightings of ROE's, falling within this model-
16 driven cost-of-equity range would be an acceptable ROE for the Commission to recognize in
17 quantifying its final rate change decision. Staff selects an ROE based upon the specifics of
18 the case.

19
20 **Q. Please explain why Staff chose to recommend the high end of the model-driven ROE**
21 **range.**

22 A. As I will discuss in detail later in my testimony, the model-driven range for the ROE in the
23 Bella Vista and Rio Rico case spans from a low of 6.9 percent to a high of 9.3 percent.

24

1 **Q. What is Staff's recommended rate of return for Bella Vista and Rio Rico?**

2 A. For Bella Vista and Rio Rico, Staff recommends a 7.5 percent overall ROR, as shown on
3 Schedule CSB-1. The ROR is calculated from the capital structure, ROE and cost of debt.
4 Staff's capital structure is composed of 70.0 percent equity and 30.0 percent debt. Staff's
5 estimated ROE for the Companies is based on the results of its Discount Cash Flow
6 ("DCF") and the Capital Asset Pricing Model ("CAPM") cost of equity methodologies. The
7 CAPM model-driven range is 6.9 percent to 9.3 percent, while the DCF model range is 8.6
8 percent to 8.9 percent, as shown on Schedule CSB-3.
9

10 *Bella Vista and Rio Rico's Proposed Overall Rate of Return*

11 **Q. Briefly summarize Bella Vista and Rio Rico's proposed capital structure, cost of debt,**
12 **ROE and overall ROR for this proceeding.**

13 A. Table 1a (Bella Vista) and Table 1b (Rio Rico) summarize the proposed capital structure, cost
14 of debt, ROE and overall ROR of 9.16 percent for Bella Vista and 8.60 percent for Rio Rico
15 in this proceeding:

16 **Bella Vista**

17 **Table 1a**

	Weight	Cost	Weighted Cost
Long-term Debt	30.00%	3.47%	1.04%
Common Equity	70.00%	11.60%	8.12%
Cost of Capital/ROR			9.16%

18 **Rio Rico**

19 **Table 1b**

	Weight	Cost	Weighted Cost
Long-term Debt	30.00%	3.47%	1.04%
Common Equity	70.00%	10.80%	7.56%
Cost of Capital/ROR			8.60%

II. THE WEIGHTED AVERAGE COST OF CAPITAL

Q. Briefly explain the cost of capital concept.

A. The cost of capital is the opportunity cost of choosing one investment over others with equivalent risk. In other words, the cost of capital is the return that stakeholders expect for investing their financial resources in a determined business venture over another alternative business venture.

Q. What is the overall cost of capital?

A. The overall cost of capital for a firm issuing a variety of securities (i.e., stock and indebtedness) represents an average of the various cost rates on all securities issued by the firm adjusted to reflect the relative weighting of each security within the firm's capital structure. Thus, for any given firm, the overall cost of capital is the firm's WACC.

Q. How is the WACC calculated?

A. The WACC is calculated by adding the weighted expected returns of a firm's securities. The WACC formula is:

Equation 1.

$$WACC = \sum_{i=1}^n W_i * r_i$$

In this equation, W_i is the weight given to the i^{th} security (the proportion of the i^{th} security relative to the portfolio) and r_i is the expected return on the i^{th} security.

Q. Can you provide an example demonstrating application of Equation 1?

A. Yes. For this example, assume that an entity has a capital structure composed of 60 percent debt and 40 percent equity. Also, assume that the embedded cost of debt is 6.0 percent and

1 the expected return on equity, i.e., the cost of equity, is 10.5 percent. Calculation of the
2 WACC is as follows:

3
$$\text{WACC} = (60\% * 6.0\%) + (40\% * 10.5\%)$$

4
$$\text{WACC} = 3.60\% + 4.20\%$$

5
$$\text{WACC} = 7.80\%$$

6
7 The weighted average cost of capital in this example is 7.80 percent. The entity in this
8 example would need to earn an overall rate of return of 7.80 percent to cover its cost of
9 capital.

10
11 **III. CAPITAL STRUCTURE**

12 *Background*

13 **Q. Please explain the capital structure concept.**

14 A. The capital structure of a firm is the relative proportions of each type of security: short-term
15 debt, long-term debt (including capital leases), preferred stock and common stock that are
16 used to finance the firm's assets.

17
18 **Q. How is the capital structure expressed?**

19 A. The capital structure of a company is expressed as the percentage of each component of the
20 capital structure (capital leases, short-term debt, long-term debt, preferred stock and common
21 stock) relative to the entire capital structure.

22
23 As an example, the capital structure for an entity that is financed by \$20,000 of short-term
24 debt, \$85,000 of long-term debt (including capital leases), \$15,000 of preferred stock and
25 \$80,000 of common stock is shown in Table 2.

Table 2

<u>Component</u>			<u>Percent</u>
Short-Term Debt	\$20,000	(\$20,000/\$200,000)	10.0%
Long-Term Debt	\$85,000	(\$85,000/\$200,000)	42.5%
Preferred Stock	\$15,000	(\$15,000/\$200,000)	7.5%
Common Stock	<u>\$80,000</u>	(\$80,000/\$200,000)	<u>40.0%</u>
Total	\$200,000		100.0%

The capital structure in this example is composed of 10.0 percent short-term debt, 42.5 percent long-term debt, 7.5 percent preferred stock and 40.0 percent common stock.

Bella Vista and Rio Rico's Capital Structure

Q. What capital structure does Bella Vista and Rio Rico propose?

A. Bella Vista and Rio Rico each propose a capital structure composed of 30.0 percent long-term debt and 70.0 percent common equity as shown on Schedule CSB-1. Bella Vista's proposed capital structure reflects projected long-term debt and common equity balances as of December 31, 2014.

Q. How does Bella Vista and Rio Rico's proposed capital structure compare to capital structures of publicly-traded water utilities?

A. Schedule CSB-4 shows the capital structures of six publicly-traded water companies ("sample water companies" or "sample water utilities") as of December 2014. The average capital structure for the sample water utilities is comprised of approximately 46.1 percent debt and 53.9 percent equity.

Staff's Capital Structure

Q. What is Staff's recommended capital structure for Bella Vista and Rio Rico?

A. For Bella Vista, Staff recommends a capital structure composed of 30.0 percent debt and 70.0 percent equity. Staff's recommended capital structure consists of \$2,632,308 long-term debt and \$6,142,053 common equity as shown on Schedule CSB-10, page 1.

For Rio Rico, Staff recommends a capital structure composed of 30.0 percent debt and 70.0 percent equity. Staff's recommended capital structure consists of \$4,924,545 long-term debt and \$11,490,604 common equity as shown on Schedule CSB-10, page 2.

IV. RETURN ON EQUITY

Background

Q. Please define the term "cost of equity capital."

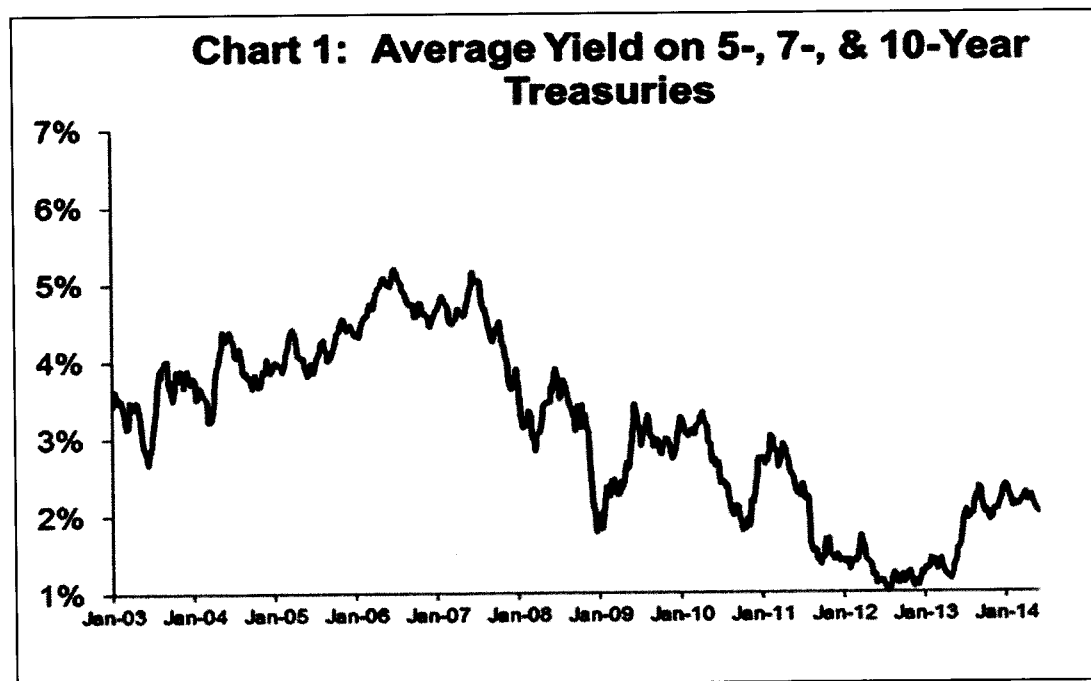
A. The cost of equity is the rate of return that investors expect to earn on their investment in a business entity given its risk. In other words, the cost of equity to the entity is the investors' expected rate of return on other investments of similar risk. As investors have a wide selection of investments to choose from, they will generally choose from investments with similar risks and similar returns. Therefore, the market determines the entity's cost of equity.

Q. Is there a correlation between interest rates and the cost of equity?

A. Yes, there is a positive correlation between interest rates and the cost of equity, as the two tend to move in the same direction. This relationship is reflected in the CAPM formula. The CAPM is a market-based model employed by Staff for estimating the cost of equity. The CAPM is further discussed in Section VI of this testimony.

1 **Q. What has been the general trend of interest rates in recent years?**

2 A. A chronological chart of interest rates is a good tool to show interest rate history and identify
3 trends. Chart 1 graphs intermediate U.S. treasury rates from January 3, 2003, to January 30,
4 2014.



15

16

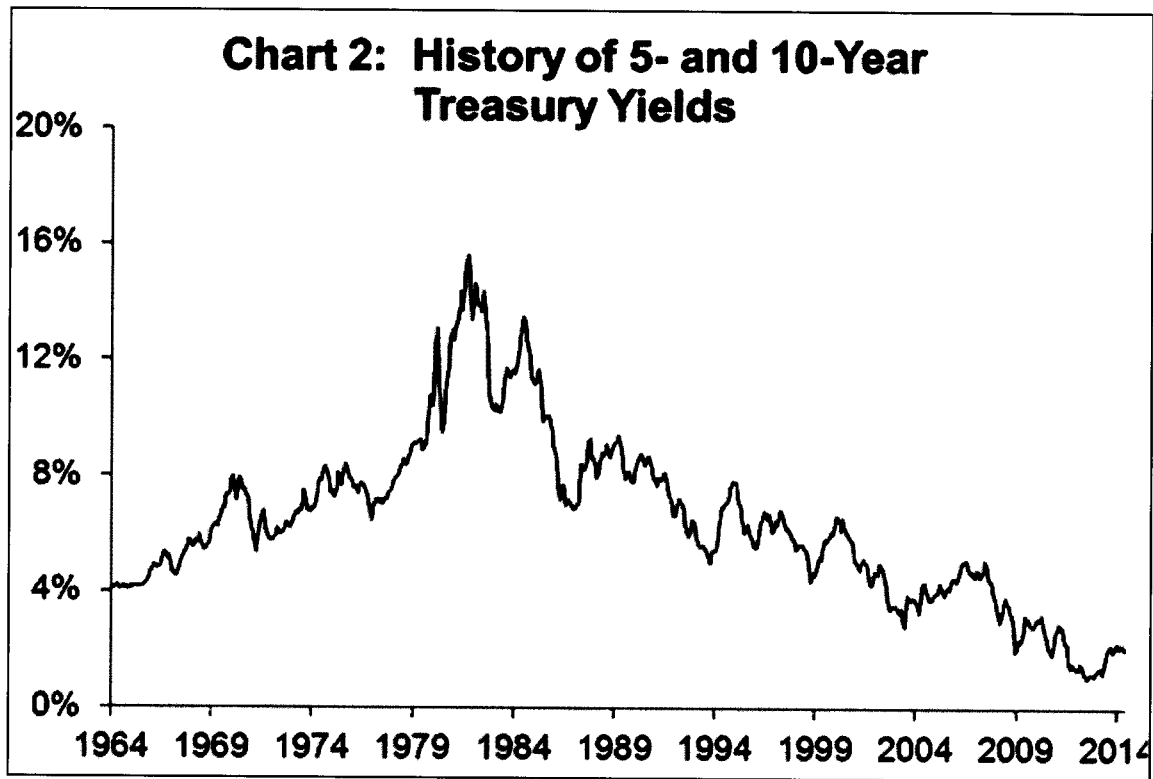
17 As shown in Chart 1, intermediate-term interest rates generally trended upward from 2003 to

18 mid-2007, trended downward until late-2012, and have trended upward since that time.

19

20 **Q. What has been the general trend in interest rates longer term?**

21 A. U.S. Treasury rates from January 1964 - January 2014 are shown in Chart 2. The chart shows
22 that interest rates trended upward through the mid-1980s and have trended downward since
23 that time.



Source: Federal Reserve

15 **Q. Do these trends suggest anything in terms of cost of equity?**

16 A. Yes. As previously noted, interest rates and the cost of equity tend to move in the same
17 direction; therefore, the cost of equity has declined in the past 30 years.

18
19 **Q. Do actual returns represent the cost of equity?**

20 A. No. The cost of equity represents investors' *expected* returns and not realized returns.

21
22 **Q. Is there any information available that leads to an understanding of the relationship**
23 **between the equity returns required for a regulated water utility and those required in**
24 **the market as a whole?**

25 A. Yes. A comparison of Betas, a component of the CAPM discussed in Section V, for the
26 water utility industry and the market provide insight into this relationship. In theory, the

1 overall market has a Beta value of 1.0, with stocks bearing greater risk (less risk) than the
2 market having Beta values higher than (lower than) 1.0, respectively. Furthermore, in
3 accordance with the CAPM, the cost of equity capital moves in the same direction as Beta.
4 Therefore, because the average Beta value (0.71)¹ for a water utility is less than 1.0, the
5 required return on equity for a regulated water utility is below that of the market as a whole.

6
7 *Risk*

8 **Q. Please define risk in relation to cost of capital.**

9 A. Risk, as it relates to an investment, is the variability or uncertainty of the returns on a
10 particular security. Investors are risk averse and require a greater potential return to invest in
11 opportunities with relatively greater risk, i.e., investors require compensation for taking on
12 additional risk. Risk is generally separated into two components. Those components are
13 market risk (systematic risk) and non-market risk (unsystematic risk, diversifiable risk or firm-
14 specific risk).

15
16 **Q. What is market risk?**

17 A. Market risk, or systematic risk, is the risk associated with an investment that cannot be
18 reduced through diversification. Market risk stems from factors that affect all securities, such
19 as possibilities of recession, war, inflation and high interest rates. Since these factors affect
20 the entire market they cannot be eliminated through diversification. Market risk does not
21 impact each security to the same degree. The degree to which a given security's return is
22 affected by market fluctuations can be measured using Beta. Beta reflects the business risk
23 and the financial risk of a security.

24

¹ See Schedule CSB-7.

1 **Q. Please define business risk.**

2 A. Business risk is the potential fluctuation of earnings inherent in a firm's operations and
3 environment, such as competition and adverse economic conditions that may impair its
4 ability to provide returns on investment. Companies in the same industry or similar lines of
5 business tend to experience the same fluctuations in business cycles.

6
7 **Q. Please define financial risk.**

8 A. Financial risk is the potential fluctuation of earnings, inherent in the use of debt financing,
9 that may impair a firm's ability to provide adequate return; the higher the percentage of debt
10 in a firm's capital structure, the greater its exposure to financial risk.

11
12 **Q. Do business risk and financial risk affect the cost of equity?**

13 A. Yes.
14

15 **Q. Is a firm subject to any other risk?**

16 A. Yes. Firms may also be subject to unsystematic or firm-specific risk. Examples of
17 unsystematic risk include losses caused by labor problems, nationalization of assets, loss of a
18 big client or weather conditions. Investors can eliminate firm-specific risk by holding a
19 diverse portfolio; thus, it is not of concern to diversified investors.

20
21 **Q. How does Bella Vista and Rio Rico's financial risk exposure compare to that of Staff's
22 sample group of water companies?**

23 A. CSB-4 shows the capital structures of Staff's seven sample water companies as of December
24 30, 2014, and the Companies' adjusted capital structure as of the end of the test year,
25 December 31, 2014. As shown, the sample water utilities were capitalized with approximately
26 46.1 percent debt and 53.9 percent equity, while Bella Vista and Rio Rico's capital structure

1 consists of approximately 30.0 percent debt and 70.0 percent equity. Thus, the Companies
2 bear less financial risk than do Staff's sample companies.

3
4 **Q. Is firm-specific risk measured by Beta?**

5 A. No. Firm-specific risk is not measured by Beta.

6
7 **Q. Is the cost of equity affected by firm-specific risk?**

8 A. No. Since firm-specific risk can be eliminated through diversification, it does not affect the
9 determination of a reasonable cost of equity.

10
11 **Q. Should investors expect additional returns for firm-specific risk?**

12 A. No. Investors who hold diversified portfolios can eliminate firm-specific risk and,
13 consequently, do not require any additional return. Since investors who choose to be less
14 than fully-diversified must compete in the market with fully-diversified investors, the former
15 cannot expect to be compensated for unique risk.

16
17 **V. ESTIMATING THE COST OF EQUITY**

18 *Introduction*

19 **Q. Did Staff directly estimate the cost of equity for Bella Vista and Rio Rico?**

20 A. No. Bella Vista and Rio Rico are not publicly-traded companies and, as such, Staff is unable
21 to directly estimate their market cost of equity due to the lack of firm-specific market data.
22 Instead, Staff must estimate the Companies' cost of equity indirectly using a representative
23 sample group of publicly traded water utilities as a proxy for Bella Vista and Rio Rico. Use of
24 a sample is appropriate, as it reduces the sample error resulting from random fluctuations in
25 the market at the time the information is gathered.

26

1 **Q. What water utilities did Staff select for its proxy group of sample companies?**

2 A. Staff's sample consists of the following seven publicly-traded water utilities: American States
3 Water, California Water, Aqua America, Connecticut Water Services, Middlesex Water, SJW
4 Corp., and York Water. Staff chose these companies because they are publicly-traded and
5 receive the majority of their earnings from regulated operations.

6
7 **Q. What models did Staff implement to estimate Bella Vista and Rio Rico's cost of**
8 **equity?**

9 A. Staff used two market-based models to estimate the cost of equity for Bella Vista and Rio
10 Rico: the DCF model and the CAPM.

11
12 **Q. Please explain why Staff chose the DCF and CAPM models.**

13 A. Staff chose to use the DCF and CAPM models because they are widely-recognized market-
14 based models and have been used extensively to estimate the cost of equity. An explanation
15 of the DCF and CAPM models follows.

16
17 *Discounted Cash Flow Model Analysis*

18 **Q. Please provide a brief summary of the theory upon which the DCF method of**
19 **estimating the cost of equity is based.**

20 A. The DCF method of stock valuation is based on the theory that the value of an investment is
21 equal to the sum of the future cash flows generated from the aforementioned investment
22 discounted to the present time. This method uses expected dividends, market price and
23 dividend growth rate to calculate the cost of capital. Professor Myron Gordon pioneered the
24 DCF method in the 1960s. The DCF method has become widely used to estimate the cost of
25 equity for public utilities due to its theoretical merit and its simplicity. Staff used the financial

information for the relevant six sample companies in the DCF model and averaged the results to determine an estimated cost of equity for the sample companies.

Q. Does Staff use more than one version of the DCF?

A. Yes. Staff uses two versions of the DCF model: the constant-growth DCF and the multi-stage or non-constant growth DCF. The constant-growth DCF assumes that an entity's dividends will grow indefinitely at the same rate. The multi-stage growth DCF model assumes the dividend growth rate will change at some point in the future.

The Constant-Growth DCF

Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?

A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

$$K = \frac{D_1}{P_0} + g$$

where : K = the cost of equity
 D_1 = the expected annual dividend
 P_0 = the current stock price
 g = the expected infinite annual growth rate of dividends

Equation 2 assumes that the entity has a constant earnings retention rate and that its earnings are expected to grow at a constant rate. According to Equation 2, a stock with a current market price of \$10 per share, an expected annual dividend of \$0.45 per share and an expected dividend growth rate of 3.0 percent per year has a cost of equity to the entity of 7.5 percent reflected by the sum of the dividend yield ($\$0.45 / \$10 = 4.5$ percent) and the 3.0 percent annual dividend growth rate.

1 **Q. How did Staff calculate the expected dividend yield (D_1/P_0) component of the**
2 **constant-growth DCF formula?**

3 A. Staff calculated the expected yield component of the DCF formula by dividing the expected
4 annual dividend (D_1) by the spot stock price (P_0) after the close of market on May 4, 2016, as
5 reported by *Yahoo Finance*.

6
7 **Q. Why did Staff use the May 4, 2016, spot price rather than a historical average stock**
8 **price to calculate the dividend yield component of the DCF formula?**

9 A. The current, rather than historic, market price is used in order to be consistent with financial
10 theory. In accordance with the Efficient Market Hypothesis, the current stock price is
11 reflective of all available information relating to the stock, and as such reveals investors'
12 expectations of future returns. Use of historical average stock prices illogically discounts the
13 most recent information in favor of less recent information. The latter is obviously stale and
14 is representative of underlying conditions that may have changed.

15
16 **Q. How did Staff estimate the dividend growth (g) component of the constant-growth**
17 **DCF model represented by Equation 2?**

18 A. The dividend growth component used by Staff is determined by the average of six different
19 estimation methods, as shown in Schedule CSB-8. Staff calculated historical and projected
20 growth estimates on dividend-per-share ("DPS"),² earnings-per-share ("EPS")³ and
21 sustainable growth bases.

22

² Derived from information provided by *Value Line*.

³ Derived from information provided by *Value Line*.

1 **Q. Why did Staff examine EPS growth to estimate the dividend growth component of the**
2 **constant-growth DCF model?**

3 A. Historic and projected EPS growth are used because dividends are related to earnings.
4 Dividend distributions may exceed earnings in the short run, but cannot continue indefinitely.
5 In the long term, dividend distributions are dependent on earnings.
6

7 **Q. How did Staff estimate historical DPS growth?**

8 A. Staff estimated historical DPS growth by calculating a compound annual DPS growth rate for
9 each of its sample companies over the 10-year period, 2005-2014. As shown in Schedule
10 CSB-5, the average historical DPS growth rate for the sample was 3.8 percent.
11

12 **Q. How did Staff estimate projected DPS growth?**

13 A. Staff calculated an average of the projected DPS growth rates for the sample water utilities
14 from *Value Line* through the period, 2018-2020. The average projected DPS growth rate is
15 7.6 percent, as shown in Schedule CSB-5.
16

17 **Q. How did Staff estimate historical EPS growth rate?**

18 A. Staff estimated historical EPS growth by calculating a compound annual EPS growth rate for
19 each of its sample companies over the 10-year period, 2005-2014. As shown in Schedule
20 CSB-5, the average historical EPS growth rate for the sample was 7.1 percent.
21

22 **Q. How did Staff estimate projected EPS growth?**

23 A. Staff calculated an average of the projected EPS growth rates for the sample water utilities
24 from *Value Line* through the period, 2018-2020. The average projected EPS growth rate is
25 6.2 percent, as shown in Schedule CSB-5.
26

1 **Q. How does Staff calculate its historical and projected sustainable growth rates?**

2 A. Historical and projected sustainable growth rates are calculated by adding their respective
3 retention growth rate terms (br) to their respective stock financing growth rate terms (vs), as
4 shown in Schedule CSB-6.

5
6 **Q. What is retention growth?**

7 A. Retention growth is the growth in dividends due to the retention of earnings. The retention
8 growth concept is based on the theory that dividend growth cannot be achieved unless the
9 company retains and reinvests some of its earnings. The retention growth is used in Staff's
10 calculation of sustainable growth shown in Schedule CSB-6.

11
12 **Q. What is the formula for the retention growth rate?**

13 A. The retention growth rate is the product of the retention ratio and the book/accounting
14 return on equity. The retention growth rate formula is:

15 Equation 3:

$$\text{Retention Growth Rate} = br$$

where: b = the retention ratio (1 – dividend payout ratio)
 r = the accounting/book return on common equity

16
17 **Q. How did Staff calculate the average historical retention growth rate (br) for the**
18 **sample water utilities?**

19 A. Staff calculated the mean of the 10-year average historical retention rate for each sample
20 company over the period, 2005-2014. As shown in Schedule CSB-6, the historical average
21 retention (br) growth rate for the sample is 3.1 percent.

22

1 **Q. How did Staff estimate its projected retention growth rate (br) for the sample water**
2 **utilities?**

3 A. Staff used the retention growth projections for the sample water utilities for the period, 2018-
4 2020, from *Value Line*. As shown in Schedule CSB-6, the projected average retention growth
5 rate for the sample companies is 4.5 percent.

6
7 **Q. When can retention growth provide a reasonable estimate of future dividend growth?**

8 A. The retention growth rate is a reasonable estimate of future dividend growth when the
9 retention ratio is reasonably constant and the entity's market price to book value ("market-to-
10 book ratio") is expected to be 1.0. The average retention ratio has been reasonably constant
11 in recent years. However, the market-to-book ratio for the sample water utilities is 2.7,
12 notably higher than 1.0, as shown in Schedule CSB-7.

13
14 **Q. Is there any financial implication of a market-to-book ratio greater than 1.0?**

15 A. Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to earn
16 an accounting/book return on its equity that exceeds its cost of equity. The relationship
17 between required returns and expected cash flows is readily observed in the fixed securities
18 market. For example, assume an entity contemplating issuance of bonds with a face value of
19 \$10 million at either 6 percent or 8 percent and, thus, paying annual interest of \$600,000 or
20 \$800,000, respectively. Regardless of investors' required return on similar bonds, investors
21 will be willing to pay more for the bonds if issued at 8 percent than if the bonds are issued at
22 6 percent. For example, if the current interest rate required by investors is 6 percent, then
23 they would bid \$10 million for the 6 percent bonds and more than \$10 million for the 8
24 percent bonds. Similarly, if equity investors require a 9 percent return and expect an entity to
25 earn accounting/book returns of 13 percent, the market will bid up the price of the entity's
26 stock to provide the required return of 9 percent.

1 **Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of**
2 **equity analyses in recent years?**

3 A. Staff has assumed that investors expect the market-to-book ratio to remain greater than 1.0.
4 Given that assumption, Staff has added a stock financing growth rate (vs) term to the
5 retention ratio (br) term to calculate its historical and projected sustainable growth rates.

6
7 **Q. Do the historical and projected sustainable growth rates Staff uses to develop its DCF**
8 **cost of equity in this case continue to include a stock financing growth rate term?**

9 A. Yes.

10
11 **Q. What is stock financing growth?**

12 A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by that
13 entity. Stock financing growth is a concept developed by Myron Gordon and discussed in his
14 book *The Cost of Capital to a Public Utility*.⁴ Stock financing growth is the product of the
15 fraction of the funds raised from the sale of stock that accrues to existing shareholders (v)
16 and the fraction resulting from dividing the funds raised from the sale of stock by the existing
17 common equity (s).

18
19 **Q. What is the mathematical formula for the stock financing growth rate?**

20 A. The mathematical formula for stock financing growth is:

Equation 4:

$$\text{Stock Financing Growth} = vs$$

where: v = Fraction of the funds raised from the sale of stock that accrues
to existing shareholders

s = Funds raised from the sale of stock as a fraction of the existing
common equity

⁴ Gordon, Myron J. *The Cost of Capital to a Public Utility*. MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

1 **Q. How is the variable v presented above calculated?**

2 A. Variable v is calculated as follows:

Equation 5:

$$v = 1 - \left(\frac{\text{book value}}{\text{market value}} \right)$$

3
4 For example, assume that a share of stock has a \$30 book value and is selling for \$45. Then,
5 to find the value of v , the formula is applied:

$$v = 1 - \left(\frac{30}{45} \right)$$

6 In this example, v is equal to 0.33.

7
8 **Q. How is the variable s presented above calculated?**

9 A. Variable s is calculated as follows:

10 Equation 6:

$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

11
12
13
14 For example, assume that an entity has \$150 in existing equity, and it sells \$30 of stock.
15 Then, to find the value of s , the formula is applied:

$$s = \left(\frac{30}{150} \right)$$

16 In this example, s is equal to 20.0 percent.

17

1 **Q. What is the *vs* term when the market-to-book ratio is equal to 1.0?**

2 A. A market-to-book ratio of 1.0 reflects that investors expect an entity to earn a
3 book/accounting return on their equity investment equal to the cost of equity. When the
4 market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the
5 entity accrues to the benefit of existing shareholders, i.e., the term *v* is equal to zero (0.0).
6 Consequently, the *vs* term is also equal to zero (0.0). When stock financing growth is zero,
7 dividend growth depends solely on the *br* term.

8
9 **Q. What is the effect of the *vs* term when the market-to-book ratio is greater than 1.0?**

10 A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a
11 book/accounting return on their equity investment greater than the cost of equity. Equation
12 5 shows that, when the market-to-book ratio is greater than 1.0, the *v* term is also greater than
13 zero. The excess by which new shares are issued and sold over book value per share of
14 outstanding stock is a contribution that accrues to existing stockholders in the form of a
15 higher book value. The resulting higher book value leads to higher expected earnings and
16 dividends. Continued growth from the *vs* term is dependent upon the continued issuance and
17 sale of additional shares at a price that exceeds book value per share.

18
19 **Q. What *vs* estimate did Staff calculate from its analysis of the sample water utilities?**

20 A. Staff estimated an average stock financing growth of 2.0 percent for the sample water utilities,
21 as shown in Schedule CSB-6.

22

1 **Q. What would occur if an entity had a market-to-book ratio greater than 1.0 as a result of**
2 **investors expecting earnings to exceed its cost of equity, and subsequently**
3 **experienced newly-authorized rates equal only to its cost of equity?**

4 A. Holding all other factors constant, one would expect market forces to move the company's
5 stock price lower, closer to a market-to-book ratio of 1.0, to reflect investor expectations of
6 reduced expected future cash flows.

7
8 **Q. If the average market-to-book ratio of Staff's sample water utilities were to fall to 1.0**
9 **due to authorized ROEs equaling their cost of equity, would inclusion of the *vs* term**
10 **be necessary to Staff's constant-growth DCF analysis?**

11 A. No. As discussed above, when the market-to-book ratio is equal to 1.0, no portion of the
12 funds raised from the sale of stock by the entity accrues to the benefit of existing
13 shareholders because the *v* term is equal to zero; thus, the *vs* term is also equal to zero. When
14 the market-to-book ratio equals 1.0, dividend growth depends solely on the *br* term. Staff's
15 inclusion of the *vs* term assumes that the market-to-book ratio continues to exceed 1.0, and
16 that the sample water utilities will continue to issue and sell stock at prices above book value
17 with the effect of benefitting existing shareholders.

18
19 **Q. What are Staff's historical and projected sustainable growth rates?**

20 A. Staff's estimated historical sustainable growth rate is 5.2 percent based on an analysis of
21 earnings retention for the sample water companies. Staff's projected sustainable growth rate
22 is 6.6 percent based on retention growth projected by *Value Line*. Schedule CSB-6 presents
23 Staff's estimates of the sustainable growth rate.

24

1 **Q. What is Staff's expected infinite annual growth rate in dividends?**

2 A. Staff's expected dividend growth rate (g) is 6.1 percent, which is the average of historical and
3 projected DPS, EPS, and sustainable growth estimates. Staff's calculation of the expected
4 infinite annual growth rate in dividends is shown in Schedule CSB-8.

5
6 **Q. What is Staff's constant-growth DCF estimate for the sample utilities?**

7 A. Staff's constant-growth DCF estimate is 8.6 percent, as shown in Schedule CSB-3.
8

9 *The Multi-Stage DCF*

10 **Q. Why did Staff implement the multi-stage DCF model to estimate the Companies' cost**
11 **of equity?**

12 A. Staff generally uses the multi-stage DCF model to consider the assumption that dividends
13 may not grow at a constant rate. The multi-stage DCF uses two stages of growth, the first
14 stage (near-term) having a four-year duration, followed by the second stage (long-term) of
15 constant growth.

16
17 **Q. What is the mathematical formula for the multi-stage DCF?**

18 A. The multi-stage DCF formula is shown in the following equation:
19

Equation 7 :

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Where : P_0 = current stock price
 D_t = dividends expected during stage 1
 K = cost of equity
 n = years of non – constant growth
 D_n = dividend expected in year n
 g_n = constant rate of growth expected after year n

1
2 **Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?**

3 A. First, Staff projected future dividends for each of the sample water utilities using near-term
4 and long-term growth rates. Second, Staff calculated the internal rate of return (cost of
5 equity) which equates the present value of the forecasted dividends to the current stock price
6 for each of the sample water utilities. Lastly, Staff calculated an overall sample average cost
7 of equity estimate.

8
9 **Q. How did Staff calculate near-term (stage-1) growth?**

10 A. The stage-1 growth rate is based on *Value Lines*' projected dividends for the next twelve
11 months, when available, and on the average dividend growth (g) rate of 6.1 percent, calculated
12 in Staff's constant DCF analysis for the remainder of the stage as shown on Schedule CSB-8.

13

1 **Q. How did Staff estimate long-term (stage-2) growth?**

2 A. Staff calculated the stage-2 growth rate using the arithmetic mean rate of growth in Gross
3 Domestic Product ("GDP") from 1929 to 2014.⁵ Using the GDP growth rate assumes that
4 the water utility industry is expected to grow at the same rate as the overall economy.
5

6 **Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?**

7 A. Staff used 6.4 percent to estimate the stage-2 growth rate as shown on Schedule CSB-9.
8

9 **Q. What is Staff's multi-stage DCF estimate for the sample utilities?**

10 A. Staff's multi-stage DCF estimate is 8.9 percent, as shown in Schedule CSB-3.
11

12 *Capital Asset Pricing Model*

13 **Q. Please describe the CAPM.**

14 A. The CAPM is used to determine the prices of securities in a competitive market. The CAPM
15 model describes the relationship between a security's investment risk and its market rate of
16 return. Under the CAPM, an investor requires the expected return of a security to equal the
17 rate on a risk-free security plus a risk premium. The model also assumes that investors will
18 sufficiently diversify their investments to eliminate any non-systematic or unique risk.⁶ In
19 1990, Professors Harry Markowitz, William Sharpe, and Merton Miller earned the Nobel
20 Prize in Economic Sciences for their contribution to the development of the CAPM.
21

⁵ www.bea.doc.gov.

⁶ The CAPM makes the following assumptions: 1) single holding period; 2) perfect and competitive securities market; 3) no transaction costs; 4) no restrictions on short selling or borrowing; 5) the existence of a risk-free rate; and 6) homogeneous expectations.

1 **Q. Did Staff use the same sample water utilities in its CAPM and DCF cost of equity**
2 **estimation analyses?**

3 A. Yes. Staff's CAPM cost of equity estimation analysis uses the same sample water companies
4 as in its DCF cost of equity estimation analysis.

5
6 **Q. What is the mathematical formula for the CAPM?**

7 A. The mathematical formula for the CAPM is:
8

Equation 8:

$$K = R_f + \beta (R_m - R_f)$$

where: R_f = risk free rate
 R_m = return on market
 β = beta
 $R_m - R_f$ = market risk premium
 K = expected return

9
10 The equation shows that the expected return (K) on a risky asset is equal to the risk-free
11 interest rate (R_f) plus the product of the market risk premium ($R_m - R_f$) multiplied by the
12 Beta (β) coefficient, where Beta represents the riskiness of the investment relative to the
13 market.
14

15 **Q. What is the risk-free rate?**

16 A. The risk-free rate is the rate of return of an investment free of default risk.
17

1 **Q. What does Staff use as surrogates to represent estimations of the risk-free rates of**
2 **interest in its historical and current market risk premium CAPM methods?**

3 A. As previously noted, Staff uses separate parameters as surrogates for the estimations of the
4 risk-free rates of interest for the historical market risk premium CAPM cost of equity
5 estimation and the current market risk premium CAPM cost of equity estimation. Staff uses
6 the average of three (5-, 7-, and 10-year) intermediate-term U.S. Treasury securities' spot rates
7 in its historical market risk premium CAPM cost of equity estimation, and the 30-year U.S.
8 Treasury bond spot rate in its current market risk premium CAPM cost of equity estimation.
9 Rates on U.S. Treasuries are largely verifiable and readily available.

10
11 **Q. What does Beta measure?**

12 A. Beta is a measure of a security's price volatility, or systematic risk, relative to the market as a
13 whole. Since systematic risk cannot be diversified away, it is the only risk that is relevant
14 when estimating a security's required return. Using a baseline market Beta of 1.0, a security
15 having a Beta value less than 1.0 will be less volatile (i.e., less risky) than the market. A
16 security with a Beta value greater than 1.0 will be more volatile (i.e., more risky) than the
17 market.

18
19 **Q. How did Staff estimate Bella Vista and Rio Rico's Beta?**

20 A. Staff used the average of the *Value Line* Betas for the sample water utilities as a proxy for the
21 Companies' Beta. Schedule CSB-7 shows the *Value Line* Betas for each of the sample water
22 utilities. The 0.71 average Beta for the sample water utilities is Staff's estimated Beta for the
23 Companies. A security having a Beta value of 0.71 is less volatile than the market as a whole,
24 and thus requires a lower return on equity than does the overall market.

25

1 **Q. What is the market risk premium ($R_m - R_f$)?**

2 A. The market risk premium is the expected return on the market, minus the risk-free rate.
3 Simplified, it is the return an investor expects as compensation for market risk.

4
5 **Q. What did Staff use for the market risk premium?**

6 A. Staff uses separate calculations for the market risk premium in its historical and current
7 market risk premium CAPM methods.

8
9 **Q. How did Staff calculate an estimate for the market risk premium in its historical
10 market risk premium CAPM method?**

11 A. Staff uses the intermediate-term government bond income returns published in the Ibbotson
12 Associates' *Stocks, Bonds, Bills, and Inflation 2015 Yearbook* to calculate the historical market risk
13 premium. Ibbotson Associates calculates the historical risk premium by averaging the
14 historical arithmetic differences between the S&P 500 and the intermediate-term government
15 bond income returns for the period 1926-2014. Staff's historical market risk premium
16 estimate is 7.6 percent, as shown in Schedule CSB-3.

17
18 **Q. How did Staff calculate an estimate for the market risk premium in its current market
19 risk premium CAPM method?**

20 A. Staff solves equation 8 above to arrive at a market risk premium using a DCF-derived
21 expected return (K) of 11.93 ($2.20 + 9.73^7$) percent using the expected dividend yield (2.20
22 percent over the next twelve months) and the annual per share growth rate (9.73 percent) that
23 *Value Line* projects for all dividend-paying stocks under its review⁸ along with the current
24 long-term risk-free rate (30-year Treasury note at 2.64 percent) and the market's average Beta

⁷ The three to five year price appreciation is 45%. $1.45^{0.25} - 1 = 9.73\%$.

⁸ May 4, 2016 issue date.

1 of 1.0. Staff calculated the current market risk premium as 9.3 percent,⁹ as shown in Schedule
2 CSB-3.

3
4 **Q. What is the result of Staff's historical market risk premium CAPM and current market**
5 **risk premium CAPM cost of equity estimations for the sample utilities?**

6 A. Staff's cost of equity estimates are 6.9 percent using the historical market risk premium
7 CAPM and 9.3 percent using the current market risk premium CAPM as shown on Schedule
8 CSB-3.

9
10 **VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS**

11 **Q. What is the result of Staff's constant-growth DCF analysis to estimate the cost of**
12 **equity for the sample water utilities?**

13 A. Schedule CSB-3 shows the result of Staff's constant-growth DCF analysis. The result of
14 Staff's constant-growth DCF analysis is as follows:

15
$$k = 2.5\% + 6.1\%$$

16
17
$$k = 8.6\%$$

18
19 Staff's constant-growth DCF estimate of the cost of equity for the sample water utilities is 8.6
20 percent.

21
22 **Q. What is the result of Staff's multi-stage DCF analysis to estimate of the cost of equity**
23 **for the sample utilities?**

24 A. Schedule CSB-9 shows the result of Staff's multi-stage DCF analysis. The result of Staff's
25 multi-stage DCF analysis is:

⁹ 11.93% = 2.64% + 1 x 9.29%

Company	Equity Cost Estimate (k)
American States Water	8.5%
California Water	8.8%
Aqua America	8.6%
Connecticut Water	8.6%
Middlesex Water	9.1%
SJW Corp	9.9%
York Water	<u>8.5%</u>
Average	8.9%

Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 8.9 percent.

Q. What is the result of Staff's historical market risk premium CAPM analysis to estimate the cost of equity for the sample utilities?

A. Schedule CSB-3 shows the result of Staff's CAPM analysis using the historical risk premium estimate. The result is as follows:

$$k = 1.5\% + 0.71 * 7.6\%$$

$$k = 6.9\%$$

Staff's CAPM estimate (using the historical market risk premium) of the cost of equity for the sample water utilities is 6.9 percent.

Q. What is the result of Staff's current market risk premium CAPM analysis to estimate the cost of equity for the sample utilities?

A. Schedule CSB-3 shows the result of Staff's CAPM analysis using the current market risk premium estimate. The result is:

$k = 2.6\% + 0.71 * 9.3\%$

$k = 9.3\%$

Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the sample water utilities is 9.3 percent.

Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.

A. The full range of Staff's cost of equity analysis results is 6.9 percent to 9.3 percent as shown in the following table:

Table 2

Method	Estimate
Constant Growth DCF Estimate	8.6%
Multi-Stage DCF Estimate	8.9%
Historical CAPM Estimate	6.9%
Current CAPM Estimate	9.3%

Q. Ms. Brown, in the recent past, Staff chose not to incorporate the results of its CAPM-based ROE in developing its overall ROE recommendation. Would you please explain why Staff has moved away from that previous position?

A. Yes. Staff has always calculated the CAPM Model-driven ROE range but effectively gave this result a zero weighting. The zero weighting approach was followed due to a noted divergence of the CAPM Model-driven results from the DCF Model-driven results.

VII. FINANCIAL RISK AND ECONOMIC ASSESSMENT ADJUSTMENTS

Q. Has Staff discontinued the direct recognition of the financial risk and economic assessment adjustments in its cost of equity analysis?

A. Yes. Staff has moved to an approach of developing its ROE recommendation that it believes is more straight forward, conceptually sound, and simpler to understand.

Let me say again that while Staff's recommended revenue requirement is based upon a specific ROE recommendation, Staff also believes that defining a point-in-time specific fair and reasonable ROE can only realistically be achieved to the point of establishing an ROE range of reasonableness. Therefore, while Staff retains the right to evaluate and/or to argue considerations of relevance that might support a more specifically defined ROE, Staff generally believes that any ROE falling within the ROE range it will discuss in specific rate case dockets would constitute an acceptable Commission decision. I will expand upon this statement as I progress through my explanation of Staff's current approach to developing its ROE recommendations.

Q. Does Staff continue to include separate ROE modifiers for such things as financial risk and the previous economic assessment adjustment?

A. No, because under the portfolio view and Staff's new methodology these separate modifiers are not necessary.

Q. Please explain how Staff believes the Commission should view the results of the ROE range established through use of the traditional ROE Models.

A. When boiled down, the argument regarding the ROE range defined through use of these traditional ROE models is that any ROE falling within this range should be considered a reasonable ROE for alternative investments with similar risk considerations. Or, said another

1 way, the lowest ROE resulting from the Model runs is just as valid as any other ROE point
2 defined by these Model runs.
3

4 **Q. What was the ROE adder recommended by Mr. Bourassa?**

5 A. I would note that Mr. Bourassa spends a great deal of time identifying and discussing such
6 risk factors, specifically on pages 50 through 51 of the cost-of-capital testimony he sponsors.
7 As seen on Mr. Bourassa's Schedule D-4.1, the Model-driven results have all been and
8 individually adjusted upward by 190 basis points for Bella Vista and 110 basis points for Rio
9 Rico, before factoring in a 30 basis point reduction in ROE for Bella Vista and a 30 point
10 reduction for Rio Rico attributable to Mr. Bourassa's financial risk arguments.
11

12 **Q. Are you aware of any other instances where Mr. Bourassa's testimony has suggested**
13 **that he was using an approach which gives consideration to these other risk factors is**
14 **very close to the manner being recommended by Staff?**

15 A. Yes. In the cost of capital testimony filed in both the instant Liberty Bella Vista rate case
16 (Docket No. 15-0367) and in the instant Liberty Rio Rico Water and Wastewater rate cases
17 (Docket No. 15-0368), page 6 line 14 through page 7, line 5, Mr. Bourassa seems to suggest
18 that he followed an approach very similar to the approach Staff is now recommending. In
19 response to a question regarding the "other risk factors" he considered in determining the
20 appropriate ROE for these three utility divisions, Mr. Bourassa says:

21
22 "I considered explicit adjustments to my ROE estimate for these
23 factors and I did take them into consideration when determining
24 **where, within the reasonableness range of analytical results** from
25 the DCF, CAPM, and RPM models, the required ROE for each of the
26 two utilities rightfully falls." [Emphasis supplied.]
27

1 **Q.** **Ms. Brown, I would like to return to the initial caveat you expressed on behalf of Staff,**
2 **i.e.,**

3
4 **“Staff also believes that defining a point-in-time specific fair and**
5 **reasonable ROE can only realistically be achieved to the point of**
6 **establishing an ROE range of reasonableness. Therefore, while**
7 **Staff retains the right to evaluate and/or to argue considerations**
8 **of relevance that might support a more specifically defined**
9 **ROE, Staff generally believes that any ROE falling within the**
10 **ROE range it will discuss in specific rate case dockets would**
11 **constitute an acceptable Commission decision.”**

12
13 **By this caveat is Staff suggesting that the Commission should accept its approach to**
14 **establishing an ROE but then continue to encourage parties to interject general**
15 **arguments regarding the recognition of ROE adders to accommodate other general**
16 **risk factors?**

17 **A.** No. Regulated utilities, especially smaller utilities, often raise concerns about the
18 complexities, cost, and lack of transparency associated with the process employed to define a
19 range of reasonableness for ROE. Staff shares, and understands these concerns and believes
20 that steps to simplification should be given fair consideration. The caveat raised by Staff was
21 not meant to suggest that Staff was only interested in injecting yet another layer of complexity
22 into the process. Staff’s intent was to acknowledge the broad discretion of the Commission
23 to base its final ROE decision on the full range of evidence before it. On a case-by-case
24 basis, any number of additional considerations, individually and collectively, could impact the
25 Commission’s ultimate ROE decision.

26
27 **VIII. RATE OF RETURN RECOMMENDATION**

28 **Q.** **What overall rate of return did Staff determine for the Companies?**

29 **A.** Staff determined a 7.5 percent ROR for the Companies, as shown in Schedule CSB-1 and the
30 following table:

**Bella Vista and Rio Rico
Table 3**

	Weight	Cost	Weighted Cost
Long-term Debt	30.00%	3.47%	1.0%
Common Equity	70.00%	9.30%	<u>6.5%</u>
Overall ROR			<u>7.5%</u>

Q. Does this conclude your direct testimony concerning Staff's recommendations concerning the cost of capital?

A. Yes, it does.

FINANCING

Q. Would you please provide a brief background of the financing applications?

A. On November 2, 2015, the Companies each filed a financing application to incur long term debt. Bella Vista requested Commission approval to borrow an amount not to exceed \$4,700,000 from its parent company Liberty Utilities Co. ("Liberty Utilities"). Rio Rico requested Commission approval to borrow an amount not to exceed \$8,900,000 from its parent company Liberty Utilities. On April 1, 2016, the certification of publication and proof of mailing was filed.

Q. What is the purpose of the loan?

A. The Companies state that the purpose of the loan is to rebalance its capital structure from 100 percent equity capital structure to a 70 percent equity and 30 percent debt capital structure.

1 **Q. What are the terms of the loan?**

2 A. For Bella Vista, the total amount of the loan will not exceed \$4,700,000. For Rio Rico, the
3 amount of the loan will not exceed \$8,900,000. In addition, the Companies will enter into
4 additional loan agreements every six months as necessary to maintain a capital structure
5 consisting of 70 percent equity and 30 percent debt. However, at no time will the individual
6 loans exceed the total amount of debt that Bella Vista or Rico Rico requested. The interest
7 rate for each loan is equal to the average of the 10-year United States Treasury bond rate as
8 published on Bloomberg Financial Markets for the prior 30 days plus a percent spread to be
9 equal to the spread on Liberty Utilities' most recent private placement. The maturity date of
10 each loan is 10 years after closing on the loan.

11
12 **Q. Did Staff perform a financial analysis?**

13 A. Yes. Staff performed a general financial analysis to ensure that the Companies will have the
14 funds to make the required loan payments.

15
16 Staff's analysis is based on the Staff adjusted test year ending December 31, 2014. The
17 financial analysis shown on Financing Schedules CSB-1 (Bella Vista) and CSB-3 (Rio Rico)
18 present selected financial information from the financial statements and the pro forma effect
19 of the proposed debt amount.

20
21 **Q. Did Staff examine the effects of the proposed financing on the Company's TIER and**
22 **DSC?**

23 A. Yes, Financing Schedules CSB-1 (Bella Vista) and CSB-3 (Rio Rico) also show the debt
24 service coverage ("DSC") and the times interest earned ("TIER") ratio. DSC represents the
25 number of times internally generated cash (i.e. earnings before interest, income tax,
26 depreciation and amortization expenses) cover required principle and interest payments on

1 debt. A DSC greater than 1.0 means operating cash flow is sufficient to cover debt
2 obligations.

3
4 TIER represents the number of times earnings before income tax expense covers interest
5 expense on debt. A TIER greater than 1.0 means that operating income is greater than
6 interest expense. A TIER less than 1.0 is not sustainable in the long term but does not
7 necessarily mean that debt obligations cannot be met in the short term.

8
9 For Bella Vista, the TIER and DSC resulting from Staff's recommended revenue requirement
10 and fully drawing the loan in the amount of \$4,700,000, taken over 10 years at 3.32 percent
11 interest, results in a pro forma TIER and DSC of 8.96 and 4.40, respectively. For Rio Rico,
12 the TIER and DSC resulting from Staff's recommended revenue requirement and fully
13 drawing the loan in the amount of \$8,900,000, taken over 10 years at 3.32 percent interest,
14 results in a pro forma TIER and DSC of 5.49 and 2.31, respectively. The pro forma TIER
15 and DSC show that the Companies would have adequate cash flows to meet all obligations
16 including the proposed debt.

17
18 Staff further concludes that issuance of the debt financing under the conditions
19 recommended by Staff for the purposes stated in the application is within the Companies'
20 corporate powers, is compatible with the public interest, will not impair its ability to provide
21 services and is consistent with sound financial practices provided Staff's recommended
22 operating income and surcharge amounts are adopted.

23
24 **Q. What are Staff's recommendations?**

25 **A. Staff recommends:**

- 1 • That the Commission authorize the Companies to incur a 10-year loan in an amount
2 not to exceed \$4,700,000 for Bella Vista and \$8,900,000 for Rio Rico with an interest
3 rate not to exceed that which is equal to the average of the 10-year United States
4 Treasury bond rate as published on Bloomberg Financial Markets for the prior 30
5 days plus a percent spread that is equal to the spread on Liberty Utilities' most recent
6 private placement.
7
- 8 • That the Commission authorize the Companies to engage in any transaction and to
9 execute any documents necessary to effectuate the authorizations granted.
10
- 11 • That the Companies be ordered to file with Docket Control, as a compliance item in
12 this matter, copies of the loan documents within 60 days of the execution of any
13 financing transaction authorized herein.
14

15 **Q. Does this conclude Staff's direct testimony regarding the Companies' requested**
16 **financing approvals?**

17 **A. Yes, it does.**

Cost of Capital Schedules

Capital Structure
 And Weighted Average Cost of Capital
 Staff Recommended and Company Proposed

[A] [B] [C] [D]

<u>Description</u>	<u>Weight (%)</u>	<u>Cost</u>	<u>Weighted Cost</u>
Staff Recommended Capital Structure for Bella Vista and Rio Rico			
Debt	30.0%	3.47%	1.0%
Common Equity	70.0%	9.30%	<u>6.5%</u>
Weighted Average Cost of Capital			7.5%
Company Proposed Capital Structure			
Bella Vista			
	30.00%	3.47%	1.04%
	70.00%	11.60%	<u>8.12%</u>
Weighted Average Cost of Capital			9.16%
Rio Rico			
Debt	30.00%	3.47%	1.04%
Common Equity	70.00%	10.80%	<u>7.56%</u>
Weighted Average Cost of Capital			8.60%
[D] : [B] x [C] Supporting Schedules: CSB-3 and CSB-4.			

Intentionally left blank

[A]

[illegible]

7 Testimony

Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	38.7%	61.3%	100.0%
California Water	45.9%	54.1%	100.0%
Aqua America	50.3%	49.7%	100.0%
Connecticut Water	45.6%	54.4%	100.0%
Middlesex Water	44.3%	55.7%	100.0%
SJW Corp	54.7%	45.3%	100.0%
York Water	<u>43.4%</u>	<u>56.6%</u>	<u>100.0%</u>
Average Sample Water Utilities	46.1%	53.9%	100.0%
	30.00%	70.00%	100.0%

Source:

Sample Water Companies from Value Line

Growth in Earnings and Dividends
 Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
	Per Share	Per Share	Earnings Per Share	Earnings Per Share
		Projected	2005 to 2014	Projected
<u>Company</u>	<u>DPS¹</u>	<u>DPS¹</u>	<u>EPS¹</u>	<u>EPS¹</u>
American States Water	6.4%	8.5%	11.6%	7.5%
California Water	1.4%	8.8%	5.0%	6.1%
Aqua America	7.8%	10.8%	8.9%	7.8%
Connecticut Water	1.9%	6.0%	5.2%	4.1%
Middlesex Water	1.4%	3.7%	4.5%	4.4%
SJW Corp	3.9%	7.0%	8.5%	NA
York Water	<u>3.9%</u>	<u>8.2%</u>	<u>6.1%</u>	<u>7.0%</u>
	3.8%	7.6%	7.1%	6.2%

1 Value Line

Sustainable Growth
 Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
	Growth	Growth	Stock	Sustainable	Sustainable
		Projected	Financing	Growth	Growth
<u>Company</u>	<u>br</u>	<u>br</u>	<u>vs</u>	<u>br + vs</u>	<u>br + vs</u>
American States Water	4.6%	6.2%	1.6%	6.3%	7.8%
California Water	2.9%	3.9%	1.5%	4.4%	5.4%
Aqua America	4.3%	5.5%	1.2%	5.5%	6.7%
Connecticut Water	2.3%	4.6%	3.7%	6.0%	8.3%
Middlesex Water	1.6%	3.2%	2.3%	3.8%	5.5%
SJW Corp	4.0%	4.4%	1.0%	5.0%	5.4%
York Water	<u>2.4%</u>	<u>4.1%</u>	<u>3.0%</u>	<u>5.3%</u>	<u>7.0%</u>
	3.1%	4.5%	2.0%	5.2%	6.6%

[B]: Value Line

[C]: Value Line

[D]: Value Line, MSN Money, and Form 10-Ks filed with the Securities and Exchange Commission (<http://www.sec.gov/>)

[E]: [B]+[D]

[F]: [C]+[D]

Selected Financial Data of Sample Water Utilities

[A] [B] [C] [D] [E] [F] [G]

<u>Company</u>	<u>4924545</u>	Spot Price	<u>Book Value</u>	Mkt To	<i>Value Line</i>	Raw
		<u>5/4/2016</u>		<u>Book</u>	Beta	Beta
American States Water	AWR	42.48	14.06	3.0	0.75	0.60
California Water	CWT	28.99	13.55	2.1	0.75	0.60
Aqua America	WTR	32.62	9.63	3.4	0.75	0.60
Connecticut Water	CTWS	48.21	21.51	2.2	0.60	0.37
Middlesex Water	MSEX	37.82	12.65	3.0	0.70	0.52
SJW Corp	SJW	34.80	17.33	2.0	0.75	0.60
York Water	YORW	29.60	8.76	<u>3.4</u>	<u>0.70</u>	<u>0.52</u>
Average				2.7	0.71	0.54

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: (-0.35 + [F]) / 0.67

Calculation of Expected Infinite Annual Growth in Dividends
Sample Water Utilities

[A]	[B]
<u>Description</u>	<u>g</u>
DPS Growth - Historical (Sch CSB-5)	3.8%
DPS Growth - Projected (Sch CSB-5)	7.6%
EPS Growth - Historical (Sch CSB-5)	7.1%
EPS Growth - Projected (Sch CSB-5)	6.2%
Sustainable Growth - Historical (Sch CSB-6)	5.2%
<u>Sustainable Growth - Projected (Sch CSB-6)</u>	<u>6.6%</u>
Average	6.1%

Multi-Stage DCF Estimates
 Final Cost of Equity Estimates

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
<u>Company</u>	Current Mkt. Price (P_0) ¹	Projected Dividends ² (Stage 1 growth)				Stage 2 growth ³	Equity Cost Estimate (K) ⁴
	11/9/2367	4924545	(D_t) d_2	d_3	d_4	(g_n)	
American States Water	42.5	0.90	0.95	1.01	1.07	6.4%	8.5%
California Water	29.0	0.69	0.73	0.77	0.82	6.4%	8.8%
Aqua America	32.6	0.71	0.75	0.80	0.85	6.4%	8.6%
Connecticut Water	48.2	1.08	1.14	1.21	1.28	6.4%	8.6%
Middlesex Water	37.8	1.01	1.07	1.14	1.21	6.4%	9.1%
SJW Corp	34.8	1.22	1.29	1.37	1.46	6.4%	9.9%
York Water	29.6	0.63	0.67	0.71	0.75	6.4%	8.5%

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Average **8.9%**

Where : P_0 = current stock price
 D_t = dividends expected during stage 1
 K = cost of equity
 n = years of non – constant growth
 D_n = dividend expected in year n
 g_n = constant rate of growth expected after year n

1 [B] see Schedule CSB-7

2 Derived from Value Line Information

3 Average annual growth in GDP 1929 - 2012 in current dollars.

4 Internal Rate of Return of Projected Dividends

Capitalization - Bella Vista

	<u>Interest</u> <u>Rate</u>	<u>Annual</u> <u>Interest</u>	<u>Amount outstanding</u> <u>as of 12/31/2014</u>	<u>Percentage of</u> <u>Capital Structure</u>
Long-Term Debt				
Liberty Utilities - Proforma	3.47%	\$ 170,882	\$ 2,632,308	
Long-Term Debt		\$ 170,882	\$ 2,632,308	30.00%
Short-Term Debt	0.0%	-	-	
Short-Term Debt		\$ -		0.00%
Total Debt		\$ 170,882	\$ 2,632,308	30.00%
Stockholder's Equity			\$ 6,142,053	
Common Shares Outstanding				
Paid in Capital				
Retained Earnings				
Total Stockholder's Equity			\$ 6,142,053	70.00%
Total Capitalization			\$ 8,774,361	100.00%

Capitalization - Rio Rico

	<u>Interest Rate</u>	<u>Annual Interest</u>	<u>Amount outstanding as of 12/31/2014</u>	<u>Percentage of Capital Structure</u>
Long-Term Debt				
Liberty Utilities - Proforma	3.47%	\$ 170,882	\$ 4,924,545	
Long-Term Debt		\$ 170,882	\$ 4,924,545	30.00%
Short-Term Debt	0.0%	-	-	
Short-Term Debt		\$ -		0.00%
Total Debt		\$ 170,882	\$ 4,924,545	30.00%
Stockholder's Equity				
Common Shares Outstanding			11,490,604	
Paid in Capital				
Retained Earnings				
Total Stockholder's Equity			\$ 11,490,604	70.00%
Total Capitalization			\$ 16,415,149	100.00%

Financing Schedules

FINANCIAL ANALYSIS

Selected Financial Information
Pro forma Includes Immediate Effects of the Proposed Long-term Debt

[A]

12/31/2014
Staff Recommended Revenue
Full Amount of Proposed Loan

1	Operating Income	\$	888,499
2	Depreciation & Amortization Expense	\$	1,087,781
3	Income Tax Expense	\$	454,471
4	Interest Expense on Debt	\$	149,944
5	Repayment of Principal	\$	403,029

TIER

6	[1+3] ÷ [4]	8.96
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DSC

7	[1+2+3] ÷ [4+5]	4.40
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8	Long-term Debt	\$	4,296,971	41.16%
9	Equity	\$	6,142,053	58.84%
10	Total Capital	\$	10,439,024	100.00%

Liberty Utilities (Bella Vista Water) Corp.
Docket Nos. W-02465A-15-0367, ET AL.
Application For Financing

Financing Schedule CSB-2

Loan Amount Requested	\$4,700,000		
Down Payment:	\$0		
Amount Financed:	\$4,700,000		
Number of years:	10	Compounding Periods:	12
Interest rate (r):	3.32%	APR:	3.37%

LOAN AMORTIZATION SCHEDULE

Period	Loan payment (1)	Beginning- of-month principal (2)	Payments		End-of-month principal [(2) - (4)] (5)	Annual Interest (6)	Annual Principal (7)	Annual Debt Payment (8)
			Interest [r * (2)] (3)	Principal [(1) - (3)] (4)				
1	\$46,081.10	\$4,700,000.00	\$13,003.33	\$33,077.76	\$4,666,922.24			
2	46,081.10	4,666,922.24	12,911.82	33,169.28	4,633,752.96			
3	46,081.10	4,633,752.96	12,820.05	33,261.05	4,600,491.91			
4	46,081.10	4,600,491.91	12,728.03	33,353.07	4,567,138.84			
5	46,081.10	4,567,138.84	12,635.75	33,445.35	4,533,693.50			
6	46,081.10	4,533,693.50	12,543.22	33,537.88	4,500,155.62			
7	46,081.10	4,500,155.62	12,450.43	33,630.67	4,466,524.95			
8	46,081.10	4,466,524.95	12,357.39	33,723.71	4,432,801.24			
9	46,081.10	4,432,801.24	12,264.08	33,817.01	4,398,984.23			
10	46,081.10	4,398,984.23	12,170.52	33,910.57	4,365,073.65			
11	46,081.10	4,365,073.65	12,076.70	34,004.39	4,331,069.26			
12	46,081.10	4,331,069.26	11,982.62	34,098.47	4,296,970.79	149,943.95	403,029.21	552,973.16

FINANCIAL ANALYSIS

Selected Financial Information
Pro forma Includes Immediate Effects of the Proposed Long-term Debt

[A]

12/31/2014

Staff Recommended Revenue for Water & Wastewater Divisions

Full Amount of Proposed Loan

1	Operating Income	\$	1,034,252
2	Depreciation & Amortization Expense	\$	860,153
3	Income Tax Expense	\$	525,948
4	Interest Expense on Debt	\$	283,936
5	Repayment of Principal	\$	763,183

TIER

6	[1+3] ÷ [4]	5.49
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DSC

7	[1+2+3] ÷ [4+5]	2.31
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8	Long-term Debt	\$	8,136,817	56.99%
9	Equity	\$	6,142,053	43.01%
10	Total Capital	\$	14,278,870	100.00%

Liberty Utilities (Rio Rico Water and Wastewater) Corp.
Docket Nos. W-02465A-15-0367, ET AL.
Application For Financing

Financing Schedule CSB-4

Loan Amount Requested	\$8,900,000		
Down Payment:	\$0		
Amount Financed:	\$8,900,000		
Number of years:	10	Compounding Periods:	12
Interest rate (r):	3.32%	APR:	3.37%

LOAN AMORTIZATION SCHEDULE

Period	Loan payment (1)	Beginning- of-month principal (2)	Payments		End-of-month principal [(2) - (4)] (5)	Annual Interest (6)	Annual Principal (7)	Annual Debt Payment (8)
			Interest [r * (2)] (3)	Principal [(1) - (3)] (4)				
1	\$87,259.95	\$8,900,000.00	\$24,623.33	\$62,636.62	\$8,837,363.38			
2	87,259.95	8,837,363.38	24,450.04	62,809.91	8,774,553.47			
3	87,259.95	8,774,553.47	24,276.26	62,983.68	8,711,569.79			
4	87,259.95	8,711,569.79	24,102.01	63,157.94	8,648,411.85			
5	87,259.95	8,648,411.85	23,927.27	63,332.68	8,585,079.17			
6	87,259.95	8,585,079.17	23,752.05	63,507.90	8,521,571.28			
7	87,259.95	8,521,571.28	23,576.35	63,683.60	8,457,887.67			
8	87,259.95	8,457,887.67	23,400.16	63,859.79	8,394,027.88			
9	87,259.95	8,394,027.88	23,223.48	64,036.47	8,329,991.41			
10	87,259.95	8,329,991.41	23,046.31	64,213.64	8,265,777.77			
11	87,259.95	8,265,777.77	22,868.65	64,391.30	8,201,386.47			
12	87,259.95	8,201,386.47	22,690.50	64,569.45	8,136,817.02	283,936.42	763,182.98	1,047,119.39

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER))
CORP., AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF)
ITS UTILITY PLANTS AND PROPERTY AND)
FOR INCREASES IN ITS WATER RATES AND)
CHARGES FOR UTILITY SERVICE BASED)
THEREON.)
_____)

DOCKET NO. W-02465A-15-0367

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER))
CORP., AN ARIZONA CORPORATION, FOR)
AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$4,700,000.)
_____)

DOCKET NO. W-02465A-15-0370

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR A DETERMINATION OF THE FAIR)
VALUE OF ITS UTILITY PLANTS AND)
PROPERTY FOR INCREASES IN ITS WATER)
CHARGES FOR UTILITY SERVICE BASED)
RATES AND THEREON.)
_____)

DOCKET NO. WS-02676A-15-0368

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$8,900,000.)
_____)

DOCKET NO. WS-02676A -15-0371

DIRECT
TESTIMONY
OF
JAMES R. ARMSTRONG
CHIEF ACCOUNTANT
ARIZONA CORPORATION COMMISSION
UTILITIES DIVISION

MAY 23, 2016

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EXECUTIVE SUMMARY
LIBERTY UTILITIES (BELLA VISTA WATER)
LIBERTY UTILITIES (RIO RICO WATER & SEWER)
DOCKET NOS. W-02465A-15-0367, W-02465A-15-0370
WS-02676A-15-0368 AND WS-02676A-15-0371

On behalf of Staff, Mr. Armstrong is filing testimony, supporting Staff's recommendations regarding the Liberty Utilities request to implement its Fair Value Arizona Rate Evaluation Model ("FARE").

Staff recommends that the Commission deny the Company's request to be authorized to use the FARE model as a pilot program in its Bella Vista Water and Rio Rico Water/Sewer Division service areas.

1 **INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is James R. Armstrong. I am employed as the Chief Accountant of the Revenue
4 Requirements and Audits Section of the Utilities Division ("Staff"), of the Arizona
5 Corporation Commission ("ACC" or "Commission"). My business address is 1200 West
6 Washington Street, Phoenix, Arizona 85007.

7
8 **Q. Please provide an overview of your education and work experience.**

9 A. I hold a Master Degree with a concentration in Accounting and a Bachelor Degree with a
10 concentration in Finance, both received from Kansas State University. I have earned the
11 distinction of being a Certified Public Accountant ("CPA"), though I do not practice as a
12 CPA. I have worked in the area of utility regulation for over 30 years. Approximately 11
13 years of this time was spent as the Rate Manager and/or as the Manager of Financial Planning
14 for Oklahoma Natural Gas Company. I've also served in various capacities for the Kansas
15 Corporation Commission, the Oklahoma Corporation Commission, and the Residential
16 Utility Consumer Office ("RUCO") in Arizona. I began my current employment with the
17 ACC in September of 2012.

18
19 **SCOPE OF TESTIMONY**

20 **Q. What is the purpose of your current testimony?**

21 A. I am filing testimony, on behalf of Staff, supporting Staff's recommendations regarding the
22 Fair Value Arizona Rate Evaluation Model ("FARE") proposal for use in both the Liberty
23 Bella Vista Water and Liberty Rio Rico Water & Sewer service areas.

24

1 **Q. What is the FARE model?**

2 A. The description provided by Liberty Utilities (“Liberty” or “Company”) witness Mr. Garlick
3 is that FARE is the ratemaking model Liberty’s ratemaking experts came up with in response
4 to the August 18, 2015 Opinion of the Arizona Court of Appeals regarding the RUCO appeal
5 of two decisions rendered by the ACC related to the adoption of a system improvement
6 benefit mechanism (“SIB”) for the Arizona Water Company. Mr. Garlick goes on to describe
7 FARE as a different ratemaking model that would “use regularly scheduled filings to reach
8 updated fair value findings, promoting rate gradualism and rate stability, and minimizing the
9 adverse consequences of regulatory lag. The intended purpose and result will be to keep rates
10 fair by updating revenues, plant and expenses each year in a simplified but entirely open and
11 transparent process.” Further, Liberty proposes the FARE model as a pilot program to be
12 authorized for five years for use in **all three** of the service areas covered by its pending rate
13 filings – Bella Vista, Rio Rico Water and Rio Rico Sewer.

14
15 **Q. Before discussing the Company’s FARE proposal in more detail, what is Staff**
16 **recommending with regard to this approval request?**

17 A. Staff recommends that the Company’s request for approval of the FARE model be **denied**.

18
19 This recommendation is being made for three primary reasons. First, because the referenced
20 Court Opinion is under appeal and the ultimate outcome of this appeal process is not known,
21 Staff believes the Company’s request for Commission approval of the FARE model is
22 premature. Second, the processing of the rate case filings being labeled as “FARE model rate
23 filings” can be effectively accommodated by the Commission’s existing rate case filing
24 guidelines if the Company desires to docket more frequent rate cases. In fact, the 20 filing
25 example schedules attached to the Liberty FARE model are, in essence, simply blank versions
26 of schedules required to accompany the current AAC § R14-2-103 rate review filing

1 schedules. There is really no need for an alternative or “different” ratemaking model when
2 the proposed new model is, for all practical purposes, just a series of compressed timelines
3 for processing a series of rate cases using the AAC § R14-2-103 guidelines. Third, Staff
4 believes that the FARE ratemaking model, as proposed and structured, should be rejected
5 because the proposed pilot program presents various shortcomings.

6
7 **Q. Please provide more details regarding the status of the SIB mechanism Court**
8 **Decision. Why is Liberty proposing the FARE at this time?**

9 A. As previously noted, Liberty indicates that its proposed FARE was developed “in response to
10 the August 18, 2015 Opinion of the Arizona Court of Appeals regarding the Residential
11 Utility Consumer Office appeal of two decisions rendered by the Arizona Corporation
12 Commission related to the adoption of a system improvement benefit mechanism (“SIB”) for
13 the Arizona Water Company.” Liberty is apparently trying to be responsive to these court
14 decisions; however, it is important to recognize that these court cases are still pending. Until
15 those cases have been completed, we can only speculate as to what the future holds for use of
16 the SIB, and perhaps for other ratemaking mechanisms. Refinements to the existing SIB
17 mechanism structure may eventually need to be made but, in any event, it is premature to
18 conclude that a different ratemaking model is going to be needed to replace the SIB.

19

1 **Q. Please expand upon the second reason for Staff's recommendation that the FARE**
2 **model be denied, that reason being that if Liberty believes that more frequent rate**
3 **filings need to be processed, existing Commission Rules already allow for more**
4 **frequent rate case filings.**

5 A. While Staff is not advocating unreasonably frequent rate case filings for the ACC-regulated
6 utilities, the truth is that frequent rate case filings are not prohibited under existing
7 Commission rules. However, rate case filings may be affected by the need of the parties to a
8 rate case to be positioned to reasonably and logically annualize the "effects" of past rate
9 increase decisions. The effects of past Commission decisions would include not only an
10 ability to annualize revenues for authorized rate increases but also, perhaps, an opportunity to
11 see the results of past decisions reflected in the utility's operations and new test year data.

12
13 It is rather interesting to note that under the Liberty FARE model proposal other adjustor
14 mechanisms would continue to be used (e.g. CAP water and purchased power cost
15 adjustment mechanisms) so there would be no resource commitment reductions, or cost
16 savings, related to the on-going need to file and review the annual/quarterly filings associated
17 with those mechanisms. In fact, the proposed ongoing utilization of such mechanisms would
18 be yet another complicating factor that the parties would confront in processing FARE
19 model filings. I will return to this discussion as a part of my explanation of the third reason
20 Staff recommends denying the FARE approval request.

21
22 **Q. Please identify and explain some of the most significant shortcomings associated with**
23 **the Company's FARE ratemaking model proposal.**

24 A. The Company's FARE ratemaking model proposal lacks sufficient front-end planning and
25 also lacks clarity regarding many details that would need to be clearly and unquestionably
26 understood by all parties in order for a new ratemaking model proposal to be successful. As

1 a result, Staff believes the amount of time required, the level of effort, the complexity, the
2 cost, and the ultimate value of the outcome to ratepayers as well as to the Company are all
3 uncertain. Staff does not intend to list all of the shortcomings it found surrounding the
4 Liberty FARE ratemaking model but suffice it to say on behalf of Staff that the proposed
5 FARE ratemaking model follows an approach to managing regulatory lag which, in my
6 opinion, can only lead to case processing frustration and the need to deal with very long and
7 unending series of currently unresolved questions. Any plan that will result in confusion will
8 also lead to a less than efficient use of time and resources.

9
10 In my opinion, Liberty would like to get the FARE concept approved as a pilot program and
11 then leave to the future the actual structure and platform under which the model would play
12 out. In his testimony, Company witness Mr. Garlick makes comments to the effect that the
13 Company “hopes” the rollout of this model over a five year period will not create an
14 overwhelming amount of work and that the Company is “committed to working hard to
15 develop the best possible model.” This testimony suggests that the Company is recognizing
16 that there will be a lot of additional work required to roll this model out and forward.
17 Further, in response to Staff’s discovery surrounding the Company’s FARE model proposal,
18 the Company repeatedly indicated that it stands ready to facilitate ongoing discussions
19 regarding modifications to its FARE proposal. Staff believes that much more forethought
20 should have gone into the FARE model proposal instead of just hoping for a successful and
21 efficient roll out of this ratemaking alternative, but promising to find solutions to problems as
22 they arise.
23

1 **Q. Please provide some specific examples of where Staff believes the Company's FARE**
2 **model proposal failed to reasonably anticipate and pre-plan for the information flow**
3 **hurdles that Staff believes will inevitably surface?**

4 A. First I want to again note that Staff does not believe that it is necessary, or beneficial to the
5 Commission, for Staff to attempt to develop an all-inclusive list of these shortcomings. That
6 being said, the Company's response to several of Staff's data requests related to the FARE
7 model clearly indicates that many key considerations have been simply left to a future point in
8 time to develop. For example, in the response provided to Staff Data Request JRA 3.2,
9 Liberty indicated that it has not attempted to develop an actual proposed tariff related to the
10 FARE mechanism. In response to Staff Data Request JRA 3.3, the Company indicated that
11 "it has not attempted to develop a specific list of minimum filing requirements ("MFRs") that
12 it believed should be required by the Commission to accompany all FARE submittals," but
13 then went on to suggest that it is willing to "consider" minimum filing requirements that Staff
14 might recommend. Third, in Staff Data Requests JRA 3.26 and 3.27 the Company was asked
15 to identify the activities that the parties would need to undertake during each of the short
16 processing times that are a part of the FARE, and also to identify the timeline for each of
17 these identified activities. Effectively, in its response, the Company said it could not provide
18 this information. A logical question is, how is it possible to assess the reasonableness of a
19 review process timeline if no effort has been undertaken to identify the activities that must be
20 completed, to assess how much time it will take to complete each such activity, and to show
21 how ALL required activities can be completed within the stated timeframe? The answer, of
22 course, is this cannot be done. Accompanying this shortcoming is the fact that FARE model-
23 related resource demands (on Staff, the Company and other parties of interest) cannot be
24 determined without having greater details regarding these required activities. In my opinion,
25 within a fully thought-out rate model development strategy, the results from this exercise

1 would need to be linked back to the MFR development stage, but no such link is observable
2 within the Company's FARE model development.

3
4 **Q. Under the Liberty FARE model proposal, will the use of adjustor mechanisms for**
5 **certain operating expenses, such as purchased power cost changes, continue?**

6 A. Yes. This is an example of the details within the Company's FARE model proposal that have
7 not been well thought out or at least not well explained. The "devil is always in the details",
8 as they say, and the ability of the parties to assess whether or not the Company's actual
9 earnings exceed the ROE band parameters, or how much of a rate change is really necessary
10 at each measurement point, is going to be a much more complex series of financial
11 maneuvers due to the need to give specific consideration to the cost recovery implications
12 associated with any such approved mechanisms. Such questions should certainly not just be
13 left to future debate.

14
15 **Q. Mr. Garlick has made statements to the effect that the Company is committed to**
16 **"working hard to develop the best model possible" and that he hopes "our regulators**
17 **can meet us part way in this effort with the vision to see that change is needed despite**
18 **the hurdles." In the spirit of this request, does Staff have specific suggestions to**
19 **make, or alternative recommendations to propose, that it believes would move**
20 **Arizona's ratemaking policies in a positive direction?**

21 A. Yes, I have two comments to offer on behalf of Staff. First, with regard to the FARE model
22 or any currently proposed substitute for this proposal, Staff truly believes that the
23 Commission should not attempt to get ahead of the pending SIB court decision appeal. Staff
24 stands ready to work with all parties to respond to the provisions of that eventual decision in
25 a productive manner so that well-reasoned ratemaking mechanisms can continue to be
26 utilized. The Commission's immediate commitment should not be attempting to understand

1 and digest an entirely new, but detail-lacking alternative, ratemaking model. Second, as the
2 Company has probably already gathered from my earlier testimony, Staff believes it is always
3 important to anticipate, evaluate, and really think through any new ratemaking proposals
4 before asking to roll out a new initiative, even as a pilot program. In my opinion, leaving too
5 much to be sorted out in the future, as I believe the FARE proposal does, is just asking for
6 future misunderstandings and case processing challenges and headaches.

7
8 **Q. Does this conclude your direct testimony comments regarding the Liberty FARE**
9 **ratemaking model proposal?**

10 **A.** Yes it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER)
CORP., AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF)
ITS UTILITY PLANTS AND PROPERTY AND)
FOR INCREASES IN ITS WATER RATES AND)
CHARGES FOR UTILITY SERVICE BASED)
THEREON.)
_____)

DOCKET NO. W-02465A-15-0367

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER)
CORP., AN ARIZONA CORPORATION, FOR)
AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$4,700,000.)
_____)

DOCKET NO. W-02465A-15-0370

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR A DETERMINATION OF THE FAIR)
VALUE OF ITS UTILITY PLANTS AND)
PROPERTY FOR INCREASES IN ITS WATER)
CHARGES FOR UTILITY SERVICE BASED)
RATES AND THEREON.)
_____)

DOCKET NO. WS-02676A-15-0368

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$8,900,000.)
_____)

DOCKET NO. WS-02676A -15-0371

DIRECT
TESTIMONY
OF
MICHAEL S. THOMPSON, P. E.
UTILITIES ENGINEER
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

MAY 5, 2016

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1 **INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Michael Thompson. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 **Q. By whom and in what position are you employed?**

7 A. I am employed by the Arizona Corporation Commission ("Commission" or "ACC") as a
8 Utilities Engineer - Water/Wastewater in the Utilities Division.

9
10 **Q. How long have you been employed by the Commission?**

11 A. I have been employed by the Commission since June 2013.

12
13 **Q. What are your responsibilities as a Utilities Engineer - Water/Wastewater?**

14 A. As a Utilities Engineer specializing in water and wastewater engineering, my responsibilities
15 include: the inspection, investigation, and evaluation of water and wastewater systems;
16 obtaining data and preparing investigative reports; providing technical recommendations and
17 suggesting corrective action for water and wastewater systems; and providing written and oral
18 testimony in rate cases and other cases before the Commission.

19
20 **Q. How many companies have you analyzed for the Utilities Division?**

21 A. I have analyzed 20 companies covering various responsibilities for the Utilities Division Staff
22 ("Utilities Staff" or "Staff").

23
24 **Q. Have you previously testified before this Commission?**

25 A. Yes, I have testified before this Commission.

26

1 **Q. What is your educational background?**

2 A. I graduated from the SUNY College of Environmental Science and Forestry (“ESF”) at
3 Syracuse, New York, and Syracuse University (“SU”) at Syracuse, New York. I have a
4 Bachelor of Science Degree in Pulp and Paper Engineering from ESF and Chemical
5 Engineering from SU.

6
7 **Q. Briefly describe your pertinent work experience.**

8 A. Prior to my employment with the Commission, I was the Operations Engineer, from 2009 to
9 2012, for the Southwest and Central Districts of Golden State Water Company (“GSWC”),
10 located in Gardena and Santa Fe Springs, California, respectively. As the Operations
11 Engineer, I provided technical assistance and support to the districts’ operations departments
12 with primary focus on resolving operational problems and optimizing the efficiency of the
13 water system operations. Prior to my employment with GSWC, I was employed with
14 Chaparral City Water Company (“Chaparral”), from 2002 to 2009, as District Operations
15 Engineer. While at Chaparral, I performed all capital, new business, and water quality
16 activities within the district. I served as field engineer/construction manager for all capital
17 and new business projects under construction. I also managed all water quality activities
18 including monitoring, sampling, and reporting as required by 40 CFR (National Primary
19 Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.

20
21 From 2000 to 2002, I was employed with the Fountain Hills Sanitary District as Engineering
22 Assistant. I performed plan review of all commercial and residential projects in the Town of
23 Fountain Hills, and managed the district’s construction projects.

24
25 From 1996 to 2000, I was employed as an Environmental Engineering Specialist with the
26 Arizona Department of Environmental Quality (“ADEQ”). During that time period, I

1 performed operations and maintenance site inspections of public water systems in Gila,
2 LaPaz, Mohave, and Southwestern Yavapai counties.

3
4 **Q. Please state your professional memberships, registrations, and licenses.**

5 A. I am registered as a Professional Engineer (Civil) in the State of Arizona, a Grade 2 Certified
6 Water Treatment Plant Operator, and a Grade 3 Certified Water Distribution System
7 Operator. I am a member of the American Water Works Association and Arizona Water
8 Association.

9
10 **PURPOSE OF TESTIMONY**

11 **Q. What was your assignment in this rate proceeding?**

12 A. My assignment was to provide Staff's engineering evaluations for the Liberty Utilities (Bella
13 Vista Water) Corp. ("Liberty Bella Vista" or "Company") rate and financing proceedings.

14
15 **Q. What is the purpose of your testimony in this proceeding?**

16 A. My testimony presents the findings of Staff's engineering evaluation of the operations for the
17 Liberty Bella Vista Water System. The findings are contained in the Engineering Report that
18 I have prepared for this proceeding. The report is included as Exhibit MST-1 in this pre-filed
19 testimony.

20
21 **ENGINEERING REPORT**

22 **Q. Please describe the information contained in your Engineering Report.**

23 A. The Report is divided into three (3) general sections: 1) *Executive Summary*, 2) *Engineering*
24 *Report Discussion*, and 3) *Engineering Report Figures and Attachments*. The *Discussion* section for the
25 Liberty Bella Vista Water System is further divided into nine (9) subsections: 1) *Introduction*,
26 *Location, and History of the Water System*, 2) *Description of the Water System*, 3) *Water Usage*, 4)

1 *Growth, 5) Arizona Department Environmental Quality Compliance, 6) Arizona Department of Water*
2 *Resources Compliance, 7) Arizona Corporation Commission Compliance, 8) Depreciation Rates, 9) Other*
3 *Issues, and 10) Financing..*

4
5 **Q. Was the Engineering Report prepared by you?**

6 A. Yes.

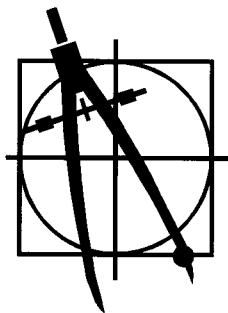
7
8 **CONCLUSIONS AND RECOMMENDATIONS**

9 **Q. What are Staff's conclusions and recommendations regarding the operations of the**
10 **SWC Water System?**

11 A. Staff's conclusions and recommendations are contained in the Executive Summary of the
12 Engineering Report.

13
14 **Q. Does this conclude your Direct Testimony?**

15 A. Yes, it does.



**ENGINEERING REPORT FOR
Liberty Utilities (Bella Vista Water)
Corporation
Docket No. W-02465A-15-0367, Et Al.
(Rates & Financing)**

By Michael Thompson, P. E.

March 23, 2016

EXECUTIVE SUMMARY

CONCLUSIONS

1. The Arizona Corporation Commission (“ACC” or “Commission”) Utilities Division Staff (“Utilities Staff” or “Staff”) concludes that the Liberty Utilities (Bella Vista Water) Corporation (“Liberty Bella Vista” or “Company”) City, South, Northern Sunrise, and Southern Sunrise water systems have adequate production and storage capacity to serve the present customer base and any reasonable growth.
2. Liberty Bella Vista’s current CC&N covers an area totaling approximately 33.18 square-miles (21,244.66 acres), and consists of seven (7) non-contiguous areas.
3. The Arizona Department of Environmental Quality (“ADEQ”) Drinking Water Compliance Status Report (“CSR”), dated February 3, 2016, indicates that the Liberty Bella Vista’s City, South, Northern Sunrise, and Southern Sunrise water systems, are currently delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.
4. Liberty Bella Vista’s City, South, Northern Sunrise, and Southern Sunrise water system service areas are not located within an Active Management Area (“AMA”). According to the Arizona Department of Water Resources (“ADWR”) water provider compliance report, dated January 19, 2016, Liberty Bella Vista water systems are in compliance with ADWR requirements governing water providers and/or community water systems.
5. Liberty Bella Vista’s water loss during the test year for the City & South water system combined, and the Northern Sunrise water system (Mustang/Crystal & Coronado/Sierra Sunset systems combined) was 9.41 percent and 6.23 percent, respectively, which are within the acceptable limits.
6. Liberty Bella Vista’s Southern Sunrise water system (Cochise/Horseshoe and Miracle Valley systems combined) water loss during the test year was 17.08 percent, which is not within the acceptable limits.

7. According to the Commission's Utilities Division Compliance Section database, Liberty Bella Vista's City, South, Northern Sunrise, and Southern Sunrise water systems currently have no delinquent Commission compliance items.
8. Liberty Bella Vista's City, South, Northern Sunrise, and Southern Sunrise water systems have approved Cross-Connection/Backflow Prevention and Curtailment Tariffs on file with the Commission.
9. Liberty Bella Vista currently has an approved Off-Site Hook-up Fee Tariff on file with the Commission. The tariff became effective April 7, 2011 per Decision No. 72251. Liberty Bella Vista has proposed changes to its current off-site hook-up fees. However, Liberty Bella Vista was unable to provide documentation supporting its proposed increases. Table AD indicates Liberty Bella Vista's current and proposed off-site hook-up fees.
10. Liberty Bella Vista has five (5) Best Management Practice ("BMP") Tariffs on file with the Commission. The five (5) BMP's were approved per Decision No. 72530, August 17, 2014.
11. Liberty Bella Vista's City & South water systems Post Test Year ("PTY") Capital Improvement Projects and Blanket Projects were found to be used and useful.
12. Liberty Bella Vista's Northern Sunrise water system PTY Blanket Projects were found to be used and useful.
13. Liberty Bella Vista's Southern Sunrise water system PTY Blanket Projects were found to be used and useful.

RECOMMENDATIONS

1. Staff recommends the annual water testing expenses of \$50,350 be used for purposes of this proceeding.
2. Staff further recommends that Liberty Bella Vista begin tracking, quantifying, and recording all consumed water associated with Unbilled Authorized Consumption for removal from the water loss calculation.
3. Staff further recommends that Liberty Bella Vista monitor the Southern Sunrise water system for an additional 12-month period to prepare an updated water loss report. If the reported water loss remains above 10 percent, Liberty Bella Vista shall submit a water loss reduction report containing a detailed analysis and plan to reduce its water loss to 10 percent or less. If Liberty Bella Vista believes it is not cost effective to reduce water loss to 10 percent or less, it shall submit a detailed cost benefit analysis to support its opinion. In no case shall Liberty Bella Vista continue to allow water loss to be greater than 15 percent. The water loss reduction report or the detailed cost benefit analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.
4. Staff further recommends that Liberty Bella Vista continue to use the Staff recommended depreciation rates listed in Table AB.

5. Staff further recommends approval of Liberty Bella Vista's proposed service line and meter installation charges included in Table AC.
6. Staff further recommends the service line and meter installation charges listed under "Staff's Recommendations" in Table AC be adopted.
7. Staff further recommends that Liberty Bella Vista continue to use the hook-up fees listed under "Staff's Recommendations" in Table AD.
8. Staff further recommends that the updated Curtailment Tariff submitted in response to Staff Data Request No. 6, as shown in Attachment 2, be approved.
9. Staff further recommends that the Cross-Connection/Backflow Prevention Tariff submitted with its application, as shown in Attachment 1, be approved.
10. Staff further recommends that Liberty Bella Vista separate its water usage data for each system within the Bella Vista City & South, Northern Sunrise, and Southern Sunrise Water Systems going forward.

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A. INTRODUCTION, LOCATION, AND HISTORY OF COMPANY

Rate and Financing Applications

On October 28, 2015, Liberty Utilities (Bella Vista Water) Corporation (“Liberty Bella Vista” or “Company”) filed an application with the Arizona Corporation Commission (“ACC” or “Commission”) for approval of a rate increase, with a 2014 test year, in Docket No. W-02465A-15-0367. Liberty Bella Vista’s current rates were approved in Commission Decision No. 72251 dated April 7, 2011.

On November 2, 2015, Liberty Bella Vista filed a financing application (Docket No. W-02465A-15-0370) requesting approval to borrow \$4,700,000 from Liberty Utilities Company, an affiliate of Liberty Bella Vista. The purpose for the loan is for Liberty Bella Vista to rebalance its current capital structure of 89.68 percent equity and 10.32 percent debt to a capital structure consisting of 70 percent equity and 30 percent debt.

On December 24, 2015, Docket Nos. W-02465A-15-0367 (Liberty Bella Vista Rate Application), W-02465A-15-0370 (Liberty Bella Vista Financing Application), W-02676A-15-0368 (Rio Rico Rate Application), and W-02676A-15-0371 (Rio Rico Financing Application) were consolidated.

Location of Company

Liberty Bella Vista is a Class B public utility water company that provides service to approximately 9,762 metered connections.¹ Liberty Bella Vista is comprised of six (6) water systems, each assigned a Public Water System (PWS”) number by Arizona Department of Environmental Quality (“ADEQ”), that includes the City System, South System, Northern Sunrise System (comprised of the Crystal/Mustang and Coronado/Sierra Sunset systems), and Southern Sunrise System (comprised of the Cochise/Horseshoe and Miracle Valley systems). The City, South, Northern Sunrise, and Southern Sunrise water systems shown in Figure 1, located in the figure section of this report, are groundwater-based systems serving the City of Sierra Vista, Arizona and its surrounding area. Sierra Vista is located approximately 75 miles southeast of the city of Tucson off Interstate Highway 90 in Cochise County, Arizona.

Company Ownership and Certificate of Convenience and Necessity (“CC&N”) History

On August 31, 2009, Bella Vista Water Company, Inc. (“BVWC”), Northern Sunrise Water Company, Inc. (“NSWC”), and Southern Sunrise Water Company, Inc. (“SSWC”) submitted a joint application for approval of authority to transfer utility assets from NSWC and SSWC to BVWC. On September 1, 2009, BVWC, NSWC, and SSWC jointly filed a motion to consolidate its joint application for approval of authority to consolidate operations and rates, and for the transfer of utility assets to BVWC. In Decision No. 72251, dated April 7, 2011, the joint application to consolidate

¹ Per water use data submitted with the application.

operations and transfer utility assets to BVWC was approved, authorizing the transfer of NSWC and SSWC CC&N's and assets to BVWC.

On June 26, 2013, Liberty Bella Vista,² formerly known as BVWC, submitted an application for an extension of the Liberty Bella Vista's South water system CC&N to provide water service to the Kings Ranch at Coronado Subdivision located in the eastern portion of Section 34, Township 23 South, Range 21 East of the Gila and Salt River Meridian, Cochise County, Arizona. In Decision No. 74257, dated January 7, 2014, the CC&N extension to provide water to the property described in its application was approved. Liberty Bella Vista's current CC&N, which covers an area totaling approximately 33.18 square-miles (21,244.66 acres) and consists of seven (7) non-contiguous areas, is shown in Figure 2.

B. DESCRIPTION OF THE WATER SYSTEM³

Liberty Bella Vista was visited on January 13, 14, and 21, 2016, by Staff Utilities Engineer, Michael Thompson. During the field inspection, Mr. Thompson was accompanied by Company representatives Mr. Martin Garland (Business Manager, Liberty Utilities - South), Mr. A. J. Garcia (Operations Manager, Liberty Bella Vista), and Mr. Gerry Becker (Manager – Rates & Regulatory, Liberty Utilities – South).⁴

1) City & South Water Systems

a) City Water System

Liberty Bella Vista's City water system consists of eighteen (18) active groundwater wells, seventeen (17) storage tanks, fourteen (14) booster pump stations (consisting of thirty-six (36) booster pumps), fourteen (14) hydro-pneumatic pressure tanks, three (3) bladder tanks), and a looped distribution system that encompasses three (3) pressure zones. Additionally, the water system has supervisory control and data acquisition ("SCADA") communication systems at Wells Sites No. 5, 7, 8, 14, 18, and 19. Schematics of the water system are illustrated in Figures 3 through 19. Detailed listings of the well, storage tank, and booster pump station facilities are included in Tables A – C.

b) South Water System

Liberty Bella Vista's South water system consists of thirteen (13) active groundwater wells, one (1) inactive groundwater well, twenty-one (21) storage tanks, seventeen (17) booster pump

² In May 2013, the Board of Directors of Bella Vista Water Company, Inc. resolved to change the corporation's name to Liberty Utilities (Bella Vista Water) Corporation. The Commission's Corporation Division records indicate that the corporation formerly known as Bella Vista Water Company, Inc. is currently known as Liberty Utilities (Bella Vista Water) Corporation ("Liberty Bella Vista").

³ The description of the water systems is based on one, or a combination of, the following sources: 1) Company's Application, 2) Information contained in the Company's Response to Staff Data Requests and, 3) Information collected during Staff's site visit.

⁴ Mr. A. J. Garcia is certified with the Arizona Department of Environmental Quality ("ADEQ") as a Grade 3 Water Distribution System Operator, a Grade 1 Water Treatment Plant Operator, a Grade 1 Wastewater Collection System Operator, and a Grade 1 Wastewater Treatment Plant Operator. Mr. Garcia's ADEQ Operator Identification No. is OP021890, with an expiration date of February 28, 2019.

stations (consisting of thirty-one (31) booster pumps), eighteen (18) hydro-pneumatic pressure tanks, and a distribution system. Additionally, the water system has SCADA communication systems at Booster Pump Station No. 1, Apache Point & Kings Ranch Booster Pump Stations, and Ash, Kings Ranch, Rail Oaks, Wild Horse, & No. 16 Well Sites. The water System is also interconnected with the Southern Sunrise Cochise/Horseshoe sub-system via a 2-inch master meter. The interconnection isolation valve is currently closed and only opened should a situation present itself where the Cochise/Horseshoe sub-system requires additional water to meet customer water demand. Schematics of the Liberty Bella South water system are illustrated in Figures 20 through 43. Detailed listings of the well, storage tank, and booster pump station facilities are included in Tables D – G.

Detailed listings of the City and South distribution mains, meters, fire hydrants, and treatment equipment and structures are included in Tables H – J. The City & South water systems consist of 93.4 miles of 2, 3, 4, 6, 8, 10, and 12 inch galvanized, steel, polyvinyl Chloride (“PVC”), asbestos concrete (“AC”), and Ductile Iron (“DI”) distribution mains, 8,824 installed meters, 184 fire line meters, and 727 fire hydrants.⁵ The in-service plant facilities (i.e., wells, tanks, booster pumps, and visible pipe) of the City & South water systems appeared to be in proper working order, properly maintained, and in good condition. Staff did not observe any leaks at the plant facilities, or in the distribution systems.

Table A. Liberty Bella Vista – City Water System Active Wells

Well ID	ADWR Well ID	Pump (hp)	Pump Yield (gpm)	Pump Yield (gpd)	Casing Depth (feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
(S) VV No. 1	55-560741	15	110	158,400	400	8	4	1997
(S) VV No. 2	55-560742	15	160	203,400	385	8	4	1997
(S) No. 1	55-610120	40	240	345,600	640	12	4	1956
(S) No. 2	55-610121	50	220	316,800	649	12	4	1958
(S) No. 3	55-610122	50	240	345,600	605	12	6	1968
(S) No. 5	55-610123	50	300	432,000	620	14	4	1972
(S) No. 7	55-610125	100	470	676,800	475	16	6	1968
(S) No. 8	55-610126	60	300	432,000	645	12	6	1954
(S) No. 9	55-610127	15	47	67,680	618	8	3	1954
(S) No. 10	55-610128	15	40	57,600	630	10	3	1956
(S) No. 11	55-610129	60	300	432,000	696	12	4	1956
(S) No. 12	55-610130	60	220	316,800	805	16	4	1972
(S) No. 13	55-610131	75	230	331,200	867	16	6	1978
(S) No. 14	55-610132	75	450	648,800	600	16	6	1972
(S) No. 15	55-610133	50	300	432,000	700	16	4	1972
(S) No. 16	55-610134	50	300	432,000	501	12	4	1960
(T) No. 18	55-518083	250	1,200	1,728,000	1,000	16	10	1987

⁵ As of December, 2014 the Liberty Bella Vista City & South Water System had 8,648 active meters.

(T) No. 19	55-519004	125	600	864,000	1,000	16	8	1987
Total	18		5,727	8,246,880				

(T) Indicates Turbine Well & (S) Indicates Submersible, (gpd) indicates gallons per day, and VV indicates Vista View.

Table B. Liberty Bella Vista - City Water System Storage Tanks		
Storage Tank Locations	Storage Tanks	
	Quantity	Gallons
Well Sites Nos. 18 & 19	2	1,500,000 Each
Well Sites Nos. 7 & 8	2	400,000 Each
Well Sites Nos. 9 & 10	1	285,000
Well Sites Nos. 1, 2, 3, 5, 11, 12, 14, & VV No. 1	10	200,000 Each
Well Site No. 5 (Well No. 16 Storage Tank)	1	100,000
Well Site No. 15	1	32,000
Total	17	6,217,000

Table C. Liberty Bella Vista - City Water System Booster Pump Stations				
Booster Pump Station Locations	Booster Pump Stations			
	Booster Pumps		Pressure Tanks	
	Horsepower ("hp")	Quantity	Gallons	Quantity
VV No. 1 Well Site	25	2	5,000	1
Well Site No. 1	20	2	5,000	1
Well Site No. 2	20	2	5,000	1
Well Site No. 3	20	2	5,000	1
Well Site No. 5	15 & 20	1/3	5,000	2
Well Site No. 7	20	2	5,000	1
Well Site No. 8	20	2	5,000	1
Well Site Nos. 9 & 10	15 & 30	2/2	80 & 5,000	1/1
Well Site No. 11	20	2	5,000	1
Well Site No. 12	20	2	5,000	1
Well Site No. 14	20	2	5,000	1
Well Site No. 15	15 & 20	1/1	5,000	1
Well Site No. 18	30	6	100	2
Well Site No. 19	30	2	5,000	1
Total		36		14 Pressure Tanks & 3 Bladder Tanks

Table D. Liberty Bella Vista – South Water System Active Wells								
Well ID	ADWR Well ID	Pump (hp)	Pump Yield (gpm)	Pump Yield (gpd)	Casing Depth (feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
(S) Ash	55-805652	5	50	72,000	80	8	3	1982
(S) Fairfield	55-203881	15	70	100,800	800	8	2.5	2004
(S) Kings Ranch	55-204088	25	170	244,800	900	8	4	2007
(S) Stump	55-610119	5	50	72,000	250	6	3	1982
(S) Wild Horse	55-553209	7.5	25	36,000	608	12	2	1997
(S) RO No. 1	55-536074	1	5	7,200	160	8	1/2	1992
(S) RO No. 2	55-597128	1.5	14	20,160	305	6	2	2003
(S) NV No. 3	55-642087	3	20	28,800	243	6	1	1958
(S) NV No. 9	55-624091	3	12	17,280	287	6	5/8	1959
(S) NV No. 10	55-641821	2	17	24,280	154	4	1	Unk
(S) NV No. 15	55-507217	5	40	57,600	205	6	2	1984
(S) NV No. 16	55-508962	5	30	43,200	215	6	2	1984
(S) NV No. 17	55-200402	7.5	17	24,480	790	8	2	2004
Total	13		520	748,800				

(S) Indicates Submersible Well, (NV) Indicates Nicksville, and (RO) Indicates Rail Oaks.

Table E. Liberty Bella Vista – South Water System Inactive Well								
Well ID	ADWR Well ID	Pump (hp)	Pump Yield (gpm)	Pump Yield (gpd)	Casing Depth (feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
(T) RO No. 3	55-583389	5	25	36,000	500	8	N/A*	2001

(T) Indicates Turbine Well, and (*) Indicates the Meter has been removed.

Table F. Liberty Bella Vista - South Water System Storage Tanks		
Storage Tank Locations	Storage Tanks	
	Quantity	Gallons
Kings Ranch Booster Pump Station	1	500,000
Booster Pump Station No. 1	1	200,000
Oaks Tank Site	1	200,000
Kings Ranch Well Site	1	100,000
Rail Oaks Well Site Nos. 1 & 2	1	100,000
Wild Horse Well Site	1	100,000
Nicksville No. 16 Well Site	1	80,000
Apache Point Tank Site	1	80,000
Nicksville No. 10 Well Site	2	10,000 & 50,000

Lone Mountain Tank Site	1	49,700
Broken Arrow Booster Pump Station	1	20,000
Triple Tanks Site	3	16,500 Each
Ash Tank Site	1	16,000
Nichols Booster Pump Station	1	7,100
Nicksville No. 9 Well Site	1	7,000
Stump Well Site	2	5,000 & 5,000
Booster Pump Station No. 2	1	3,000
Total	21	1,582,300

Table G. Liberty Bella Vista - South Water System Booster Pump Stations				
Booster Pump Station Locations	Booster Pump Stations			
	Booster Pumps		Pressure Tanks	
	hp	Quantity	Capacity (Gallons)	Quantity
Apache Point Tank Site	15	2	1,500	1
Booster Pump Station No. 1	10 & 25	2/2	5,000	2
Booster Pump Station No. 2	5	2	1,000	1
Broken Arrow BPS	2	2	80	1
Fairfield Well Site	N/A	0	1,000	1
Kings Ranch BPS	40	2	7,000	1
Kings Ranch Well Site	40	2	80	1
Nichols Booster Pump Station	2	2	80	1
NV No. 3 Well Site	N/A	0	30	1
NV No. 9 Well Site	2	2	1,000	1
NV No. 10 Well Site	2	2	6,000	1
NV No. 16 Well Site	25	2	2,000	1
Oaks Tank Site	7.5 & 75	2/1	5,000	1
Rail Oaks No. 1 & 2 Well Site	5	2	5,000	1
Rail Oaks No. 3 Well Site	N/A	0	80	1
Stump Well Site	5	2	1,000	1
Wild Horse Well Site	15	2	5,000	1
Total		31		18

NV) Indicates Nicksville, and BPS Indicates Booster Pump Station.

Table H. Liberty Bella Vista – City & South Water System Distribution Mains		
Diameter (inches)	Material	Length (feet)
2	Galvanized	27,000
2	Steel	9,000
3	Asbestos Concrete (“AC”)	16,000
4	AC	86,500
6	AC	180,600
8	AC	118,895
10	AC	3,300
12	Steel	600
2	Polyvinyl Chloride (“PVC”)	2,935
3	PVC	175
4	PVC	1,330
6	PVC	5,052
8	PVC	14,015
12	PVC	15,000
4	Ductile Iron (“DI”)	164
6	DI	1,125
8	DI	10,257
12	DI	1,000
Total Length		(93.4 miles) 492,948

Table I. Liberty Bella Vista – City & South Water Systems Meters & Fire Hydrants					
Customer Meters		Fire Line Meters		Fire Hydrants	
Size (inches)	Quantity	Fire Line (inches)	Quantity	Type	Quantity
5/8 x 3/4	8,150	Up to 4	141	Standard	719
3/4	43	6	35	Other	8
1	161	8	8		
1 1/2	103				
2	309				
3	49				
4	7				
6	1				
8	1				
Total	8,824 (8,648 Active)		184		727

Table J. Liberty Bella Vista – City & South Water Systems Treatment Equipment & Structures	
City Water System	
Location	Structures & Equipment
VV No. 1 Well Site	Chain Link Fence, Liquid Chlorination Shed, & Eye Wash
VV No. 2 Well Site	Chain Link Fence
Well Site Nos. 1, 3, 9, 10, & 15	Chain Link Fence, Liquid Chlorination Unit, & Eye Wash
Well Site No. 2	Block Wall, Liquid Chlorination Unit, & Eye Wash
Well Site No. 5	Block Wall, Liquid Chlorination Unit, Eye Wash, Storage Building, Garage, Parking Canopy, & SCADA System
Well Site No. 7	Chain Link Fence, Liquid Chlorination Shed, Eye Wash, & SCADA System
Well Site No. 8	Chain Link Fence, Liquid Chlorination Shed, Eye Wash, Storage Building, & SCADA System
Well Site Nos. 11 & 12	Chain Link Fence, Liquid Chlorination Unit, Eye Wash, & Altitude Valve & Vault
Well Site No. 13	Chain Link Fence, Storage Building (Previously used to house the Tablet Chlorinator)
Well Site No. 14	Chain Link Fence, Liquid Chlorination Unit, Eye Wash, & SCADA System
Well Site No. 16	Chain Link Fence, Liquid Chlorination Shed, & Eye Wash
Well Site No. 18	Chain Link Fence, Liquid Chlorination Shed, Eye Wash, Well Building, Inactive Gas Engine, 92 Solar Panels, & SCADA System
Well Site No. 19	Chain Link Fence, Liquid Chlorination & Storage Building, Eye Wash, Air Relief Valve, & SCADA System
Office & Maintenance	Chain Link Fence, Office Building, Maintenance Building, 183 Solar Panels, John Deere Backhoe, Compressed Natural Gas Fuel Station, Dump Truck, Vector Potholing Machine, Air Compressor, Water Hauling Truck, & two (2) generators (25 kilovolt-amperes (“kVA”) & 60 kVA).
South Water System	
Ash Well Site	Chain Link Fence, Liquid Chlorination Unit, Eye Wash, & SCADA System
Fairfield & NV No. 10 & 16 Well Sites	Chain Link Fence, Liquid Chlorination Unit, & Eye Wash
Kings Ranch Well Site	Chain Link Fence, Liquid Chlorination Shed, Eye Wash, & SCADA System
Stump Well Site	Chain Link Fence, Liquid Chlorination Shed, & Eye Wash
Wild Horse Well Site	Chain Link Fence, Liquid Chlorination Shed, Eye Wash, Altitude Valve & Vault, & SCADA System
NV No. 3 Well Site	Well Building
NV No. 9 Well Site	Chain Link Fence, Well & Liquid Chlorination Building, & Eye Wash
NV No. 15 & 17 & Rail Oaks No. 3 Well Sites, Oaks Tank & Triple Tank Sites, Broken Arrow & Nichols BPS, & BPS No. 2	Chain Link Fence
Rail Oaks No. 1 & 2 Well Site	Chain Link Fence, Liquid Chlorination Unit, Eye Wash, & Storage Shed
Ash Tank Site	Chain Link Fence & Solar Panel
Apache Point BPS	Block Wall, Altitude Valve & Vault, & SCADA System
BPS No. 1	Chain Link Fence, & Altitude Valve & Vault
Kings Ranch BPS	Chain Link Fence & SCADA System

(BPS) Indicates Booster Pump Station

2) *Northern Sunrise Water System*

a) Mustang/Crystal System

The current operation of the Mustang/Crystal system consists of two (2) active groundwater wells, one (1) storage tank, one (1) booster pump station (consisting of two (2) booster pumps), one (1) hydro-pneumatic pressure tank, one (1) bladder tank, and an interconnected distribution system. Additionally, SCADA communication systems are located at the Mustang and Crystal well sites. During the test year, Liberty Bella Vista installed a transmission line from the Crystal Well Site to the Mustang Well Site storage tank in order to provide redundancy for the Mustang/Crystal subsystem. The Crystal well pumps to distribution and the Mustang well site storage tank. The Mustang well pumps directly to the Mustang well site storage tank.

b) Coronado/Sierra Sunset System

The Coronado/Sierra Sunset system consists of two (2) active groundwater wells, three (3) storage tanks, five (5) abandoned 5,000 gallon storage tanks, one (1) booster pump station (consisting of two (2) booster pumps), one (1) hydro-pneumatic pressure tank, two (2) bladder tanks, and an interconnected distribution system. Additionally, a SCADA communication system is located at the Coronado well site. The Sierra Sunset well pumps to the distribution system and to the Coronado well site storage tanks. The Coronado well pumps directly to the Coronado well site storage tanks. Water in the storage tanks is pumped to the distribution system via booster pumps.

Schematics of the Northern Sunrise water system are illustrated in Figures 44 through 48. Detailed listings of the well, storage tank, and booster pump station facilities are included in Tables K – L. Detailed listings of the distribution mains, meters, and treatment equipment and structures are included in Tables M – O. The water system consists 2, 3, 4, & 6 inch PVC and AC distribution mains, and 352 installed meters.⁶ The in-service plant facilities (i.e., wells, tanks, booster pumps, and visible pipe) of the Liberty Bella Vista Northern Sunrise water systems appeared to be in proper working order, properly maintained, and in good condition. Staff did not observe any leaks at the plant facilities, or in the distribution systems.

⁶ As of December, 2014 the Liberty Bella Vista Northern Sunrise Water System had 337 active meters.

Table K. Liberty Bella Vista – Northern Sunrise Water System Active Wells

Well ID	ADWR Well ID	Pump (hp)	Pump Yield (gpm)	Pump Yield (gpd)	Casing Depth (feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
Mustang/Crystal System								
Mustang Well	55-807770	5	28	40,320	434	6	2	1971
Crystal Well	55-220433	20	140	201,600	570	8	2	2011
Subtotal			168	241,920				
Coronado/Sierra Sunset System								
Coronado Well	55-807773	10	110	158,400	302	8	2	1958
Sierra Sunset Well	55-807772	5	10	14,400	342	8	2	1960
Subtotal			120	172,800				
Total			288	414,720				

Table L. Liberty Bella Vista – Northern Sunrise Water System Storage Tanks & Booster Pump Stations

Location	Storage Tanks		Booster Pumps		Pressure Tanks	
	Capacity (Gallons)	Quantity	hp	Quantity	Capacity (Gallons)	Quantity
Mustang/Crystal System						
Mustang Well Site	100,000	1	15	2	81	1
Crystal Well Site	0	0	0	0	1,500	1
Subtotal	100,000	1		2		2
Coronado/Sierra Sunset System						
Coronado Well Site	35,000/5,000	2/5 ¹	7.5/10	1/1	2,000	1
Sierra Sunset Well Site	0	0	0	0	81	2
Subtotal	35,000	2		2		3
Total	170,000	3/5¹		4		5

¹ The five (5) 5,000 gallon storage tanks have been abandoned and are no longer used and useful.

Table M. Liberty Bella Vista – Northern Sunrise Water System Distribution Mains

Diameter (inches)	Material	Length (feet)
2	PVC	Unknown
3	PVC	Unknown
4	PVC/AC	Unknown
6	AC	Unknown
Total Length		Unknown

Table N. Liberty Bella Vista – Northern Sunrise Water System Meters	
Size (inches)	Quantity
5/8 x 3/4 inch	352
1	2
2	1
Total	355 (337 Active Meters)

Table O. Liberty Bella Vista – Northern Sunrise Water System Treatment Equipment & Structures	
Mustang/Crystal System	
Location	Structures & Equipment
Mustang Well Site	Chain Link Fence, Liquid Chlorination Metal Housing, Eye Wash, & SCADA
Crystal Well Site	Chain Link Fence, Liquid Chlorination Metal Housing, Eye Wash, & SCADA
Coronado/Sierra Sunset System	
Coronado Well Site	Chain Link Fence, Liquid Chlorination Unit, Eye Wash, & SCADA
Sierra Sunset Well Site	Chain Link Fence, Liquid Chlorination Unit, & Eye Wash

3) *Southern Sunrise Water System*

a) Cochise/Horseshoe System

The current operation of the Cochise/Horseshoe system consists of four (4) active groundwater wells, four (4) storage tanks, three (3) booster pump stations (consisting of seven (7) booster pumps), one (1) bladder tank, two (2) hydro-pneumatic pressure tanks, one (1) abandoned 5,000 gallon storage tank, one (1) abandoned hydro-pneumatic pressure tank, and an interconnected distribution system. Additionally, the water system has a SCADA communication system at the Naranja Well Site. The water System is also interconnected with the Liberty Bella Vista South water system via a 2-inch master meter. The interconnection isolation valve is currently closed and only opened in emergency situations.

b) Miracle Valley System

The current operation of the Miracle Valley system consists of two (2) active groundwater wells, one (1) storage tank, one (1) hydro-pneumatic pressure tank, one (1) bladder tank, one (1) booster pump station, and an interconnected distribution system. Additionally, the water system has SCADA communication systems at Miracle Valley Well Site No. 1.

Schematics of the Southern Sunrise water system are illustrated in Figures 49 through 54. Detailed listings of the well, storage tank, and booster pump station facilities are included in Tables P – Q. Detailed listings of the Liberty Bella Vista Southern Sunrise distribution mains, meters, fire hydrants, and treatment equipment and structures are included in Tables R – T. The water system

consists of 2, 3, 4, and 6 inch PVC distribution mains, 860 meters.⁷ The in-service plant facilities (i.e., wells, tanks, booster pumps, and visible pipe) of the Liberty Bella Vista Southern Sunrise water system appeared to be in proper working order, properly maintained, and in good condition. Staff did not observe any leaks at the plant facilities, or in the distribution system.

Table P. Liberty Bella Vista – Southern Sunrise Water System Active Wells

Well ID	ADWR Well ID	Pump (hp)	Pump Yield (gpm)	Pump Yield (MGD)	Casing Depth (feet)	Casing Diameter (inches)	Meter Size (inches)	Year Drilled
Cochise/Horseshoe System								
Naranja Well No. 1	55-563118	5	75	108,000	150	8	2	1997
Naranja Well No. 2	55-550951	5	45	64,800	144	10	2	1995
Naranja Well No. 3	55-563117	5	45	64,800	145	6	2	1997
Jaxel Well	55-805546	5	25	36,000	458	8	1.5	1973
Subtotal			190	273,600				
Miracle Valley System								
MV Well No. 1	55-630018	40	150	216,000	524	16	6	1959
MV Well No. 2	55-527262	10	110	158,400	298	6	2	1990
Subtotal			260	374,400				
Total			450	648,000				

Table Q. Liberty Bella Vista – Southern Sunrise Water System Storage Tanks & Booster Pump Stations

Location	Storage Tanks		Booster Pumps		Pressure Tanks	
	Capacity (Gallons)	Quantity	hp	Quantity	Capacity (Gallons)	Quantity
Cochise/Horseshoe System						
Naranja Well Site	170,000/5,000	1/1 ¹	20	3	81/5,000	1/1 ²
Jaxel Well Site	10,000	1	5	2	1,000	1
Horse Shoe Tank Site	16,000	2	10	2	3,000	1
Subtotal	212,000	4		7		3
Miracle Valley System						
Miracle Valley Well Site No. 1	100,000	1	15	2	100	1
Miracle Valley Well Site No. 2	0	0		0	1,000	2
Subtotal	100,000	1		2		3
Total	312,000	1		9		5

1 The 5,000 gallon storage tank has been abandoned and is no longer used and useful.

2 The 5,000 gallon hydro-pneumatic pressure tank has been abandoned and is no longer used and useful.

⁷ As of December, 2014 the Liberty Bella Vista Southern Sunrise Water System had 777 active meters.

Table R. Liberty Bella Vista – Southern Sunrise Water System Distribution Mains		
Diameter (inches)	Material	Length (feet)
2	PVC	Unknown
3	PVC	Unknown
4	PVC	Unknown
6	PVC	Unknown
Total Length		Unknown

Table S. Liberty Bella Vista – Southern Sunrise Water System Meters	
Size (inches)	Quantity
5/8 x 3/4 inch	856
1	3
2	1
Total	860 (777 Active Meters)

Table T. Liberty Bella Vista – Southern Sunrise Water System Treatment Equipment & Structures	
Cochise/Horseshoe System	
Location	Structures & Equipment
Naranja Well Site	Chain Link Fence, Liquid Chlorination Metal Housing, Eye Wash, & SCADA
Jaxel Well Site	Chain Link Fence, & Liquid Chlorination Metal Housing
Horseshoe Tank Site	Chain Link Fence, & Storage Building
Miracle Valley Sunset System	
Miracle Valley Well Site No. 1	Chain Link Fence, Liquid Chlorination Metal Housing, Eye Wash, & SCADA
Miracle Valley Well Site No. 2	Chain Link Fence, & Liquid Chlorination Unit

C. WATER USE

1) *Water Sold – City & South Water Systems*

The average daily water consumption (gallons used) per connection that Liberty Bella Vista's City & South water systems experienced each month during the 2014 test year are indicated in Table U and graphically illustrated in Figure 55. Customer consumption included an average daily high water usage of 415 gallons per day ("gpd") per connection (8,589 connections) in June 2014, and an average daily low water usage of 232 gpd per connection (8,648 connections) in December 2014. The average daily water usage during the twelve-month period was 303 gpd per connection. Liberty Bella Vista reported that its City & South water systems combined recorded 1,048,142,923 gallons of water produced, 949,942,070 gallons of water sold, and 98,650,553 gallons of water unaccounted for during the test year.

2) *Water Sold – Northern Sunrise Water System*

The average daily water consumption (gallons used) per connection that Liberty Bella Vista's Northern Sunrise water system experienced each month during the 2014 test year are indicated in Table V and graphically illustrated in Figure 56. Customer consumption included an average daily high water usage of 331 gpd per connection (339 connections) in June 2014, and an average daily low water usage of 140 gpd per connection (335 connections) in January 2014. The average daily water usage during the twelve-month period was 204 gpd per connection. Liberty Bella Vista reported that its Northern Sunrise water system (Mustang/Crystal & Coronado/Sierra Sunset systems combined) recorded 26,859,871 gallons of water produced, 25,186,241 gallons of water sold, and 1,673,630 gallons of water unaccounted for during the test year.

3) *Water Sold – Southern Sunrise Water System*

The average daily water consumption (gallons used) per connection that Liberty Bella Vista's Southern Sunrise water system experienced each month during the 2014 test year are indicated in Table W and graphically illustrated in Figure 57. Customer consumption included an average daily high water usage of 331 gpd per connection (339 connections) in June 2014, and an average daily low water usage of 140 gpd per connection (335 connections) in January 2014. The average daily water usage during the twelve-month period was 204 gpd per connection. Liberty Bella Vista reported that its Southern Sunrise water system (Cochise/Horseshoe & Miracle Valley systems combined) recorded 26,859,871 gallons of water produced, 25,186,241 gallons of water sold, and 1,673,630 gallons of water unaccounted for during the test year.

Table U. Liberty Bella Vista – City & South Water Systems Water Consumption & Water Loss Summary

Month/Year	Active Meters (Connections)	Production (Gallons)	Water Sold (Gallons)	Non-Revenue Water (Gallons)	Consumption per Day (Gallons)	Consumption per Day per Connection (Gallons)	Water Loss
Jan-14	8,503	77,047,279	69,155,100	7,892,179	2,230,810	262	10.24%
Feb-14	8,538	70,700,977	67,364,256	3,336,721	2,405,866	282	4.72%
Mar-14	8,560	81,705,988	64,787,814	16,918,174	2,089,929	244	20.71%
Apr-14	8,580	93,861,535	76,773,201	17,088,334	2,559,107	298	18.21%
May-14	8,599	110,243,430	91,271,068	18,972,362	2,944,228	342	17.21%
Jun-14	8,589	123,095,695	106,825,826	16,269,869	3,560,861	415	13.22%
Jul-14	8,612	98,609,992	110,559,084	(11,949,092) ¹	3,566,422	414	-12.12%
Aug-14	8,612	83,773,375	83,397,768	375,607	2,690,251	312	0.45%
Sep-14	8,652	74,594,394	76,078,919	(1,484,525) ¹	2,535,964	293	-1.99%
Oct-14	8,630	84,882,168	63,612,984	21,269,184	2,052,032	238	25.06%
Nov-14	8,640	76,638,781	77,528,755	(889,974) ¹	2,584,292	299	-1.16%
Dec-14	8,648	72,989,009	62,137,295	10,851,714	2,004,429	232	14.87%
Total		1,048,142,623	949,492,070	98,650,553	2,602,016*	303*	9.41%*

Note: * Asterisk indicates the value is an average. 1 – The parentheses () indicates negative Unaccounted for data.

Table V. Liberty Bella Vista – Northern Sunrise Water System Water Consumption & Water Loss Summary

Month/Year	Active Meters (Connections)	Production (Gallons)	Water Sold (Gallons)	Non-Revenue Water (Gallons)	Consumption per Day (Gallons)	Consumption per Day per Connection (Gallons)	Water Loss
Jan-14	335	1,716,661	1,451,152	265,509	46,811	140	15.47%
Feb-14	337	1,653,853	1,736,564	(82,711) ¹	62,020	184	-5.00%
Mar-14	337	2,119,873	1,632,748	487,125	52,669	156	22.98%
Apr-14	339	2,503,670	2,055,054	448,616	68,502	202	17.92%
May-14	339	3,238,196	2,491,462	746,734	80,370	237	23.06%
Jun-14	339	3,518,270	3,362,805	155,465	112,094	331	4.42%
Jul-14	338	2,297,079	3,267,192	(970,113) ¹	105,393	312	-42.23%
Aug-14	337	2,125,144	2,133,239	(8,095) ¹	68,814	204	-0.38%
Sep-14	337	1,907,024	1,905,040	1,984	63,501	188	0.10%
Oct-14	339	1,975,013	1,686,223	288,790	54,394	160	14.62%
Nov-14	337	2,046,197	1,937,787	108,410	64,593	192	5.30%
Dec-14	337	1,758,891	1,526,975	231,916	49,257	146	13.19%
Total		26,859,871	25,186,241	1,673,630	69,035*	204*	6.23%*

Note: * Asterisk indicates the value is an average.
1 – () Parentheses indicates negative Unaccounted for data.

Table W. Liberty Bella Vista – Southern Sunrise Water System Water Consumption & Water Loss Summary

Month/Year	Active Meters (Connections)	Production (Gallons)	Water Sold (Gallons)	Non-Revenue Water (Gallons)	Consumption per Day (Gallons)	Consumption per Day per Connection (Gallons)	Water Loss
Jan-14	783	5,069,800	3,961,097	1,108,703	127,777	163	21.87%
Feb-14	792	4,918,064	3,970,992	947,072	141,821	179	19.26%
Mar-14	794	5,718,316	3,877,171	1,841,145	125,070	158	32.20%
Apr-14	794	6,300,874	5,044,437	1,256,437	168,148	212	19.94%
May-14	794	7,251,494	5,733,966	1,517,528	184,967	233	20.93%
Jun-14	795	8,322,276	7,142,503	1,179,773	238,083	299	14.18%
Jul-14	787	5,993,655	6,773,927	(780,272) ¹	218,514	278	-13.02%
Aug-14	783	5,542,832	4,778,676	764,156	154,151	197	13.79%
Sep-14	781	5,085,646	4,224,632	861,014	140,821	180	16.93%
Oct-14	784	5,256,014	3,906,206	1,349,808	126,007	161	25.68%
Nov-14	781	4,877,490	4,382,080	495,410	146,069	187	10.16%
Dec-14	777	4,817,650	3,546,878	1,270,772	114,415	147	26.38%
Total		69,154,111	57,342,565	11,811,546	157,154*	199*	17.08%*

Note: * Asterisk indicates the value is an average.
1 – () Parentheses indicates negative Unaccounted for data.

4) *Non-Revenue Water*

The American Water Works Association (“AWWA”) no longer uses the term Unaccounted for Water. The term has been abandoned by the AWWA primarily because it has been deemed imprecise, inconsistent, and an unreliable performance measure. Instead, the AWWA employs the term Non-Revenue water. The term Non-Revenue water is defined to reflect the distributed volume of water that is not reflected in customer billings. Non-Revenue water (the difference between the gallons of water produced and sold) is specifically defined as the sum of Unbilled Authorized Consumption (water for firefighting, flushing, etc.) plus Water Loss. Water Loss is defined as the sum of Apparent Losses (customer & company meter inaccuracies, unauthorized consumption or theft, and systematic data handling errors), plus Real Losses (system leakage and storage tank overflows).

Water Loss should be 10 percent or less and never more than 15 percent. It is important to be able to reconcile the difference between water sold and water produced by the source. A water balance/audit will allow a water company to identify water and revenue losses due to system leakage, storage tank overflows, meter inaccuracies, data handling errors, and any non-metered water use such as theft and flushing.

Liberty Bella Vista’s Water Loss percentages include the total gallons of Non-Revenue water in its calculation. In other words, Unbilled Authorized Consumption (flushing, firefighting, etc.) gallons are included in the Water Loss percentages. Accounting for and removing Unbilled Authorized Consumption gallons from the water loss calculation would provide a more accurate account of water system water loss. For this reason, Staff recommends that Liberty Bella Vista begin tracking, quantifying, and recording all consumed water associated with Unbilled Authorized Consumption for removal from the water loss calculation.

a) City & South Water Systems

As indicated in Table U, the City & South water systems combined had 2,602,016 gallons of Non-Revenue water during the test year ending December, 2014. As a result, the City & South water systems combined water loss was approximately 9.41 percent which is within the acceptable limits.

b) Northern Sunrise Water System

As indicated in Table V, the Northern Sunrise water system (Mustang/Crystal & Coronado/Sierra Sunset systems combined) had 1,673,630 gallons of Non-Revenue water during the test year ending December, 2014. As a result, the Northern Sunrise water system combined water loss was approximately 6.23 percent which is within the acceptable limits.

c) Southern Sunrise Water System

As indicated in Table W, the Southern Sunrise water system (Cochise/Horseshoe & Miracle Valley systems combined) had 11,811,546 gallons of Non-Revenue water during the test year ending

December, 2014. As a result, the Southern Sunrise water system combined water loss was approximately 17.08 percent which is not within the acceptable limits.

d) City, South, Northern Sunrise, & Southern Sunrise systems

In Decision No. 72251, dated April 7, 2011, Liberty Bella Vista was ordered to monitor its water systems for a 12-month period to prepare a water loss report to be filed with Docket Control as a compliance item. On August 8, 2012, Liberty Bella Vista filed its Notice of Compliance pursuant to Decision No. 72251. As a result, Liberty Bella Vista's City & South and Northern Sunrise water systems water loss percentages were within the acceptable limits. However, the Southern Sunrise water system experienced water loss greater than 10 percent (26.5 percent) and therefore, was not within the acceptable limits. Subsequently, Liberty Bella Vista supplemented its August 8, 2012 filing with a 2012 and 2013 Action Plan, dated and docketed December 13, 2012. Accordingly, as of November, 2012, Liberty Bella Vista was able to reduce its Southern Sunrise water system water loss approximately 26.4 percent (decrease in water loss from 26.5 percent to 19.5 percent). As of December, 2014, Liberty Bella Vista decreased its Southern Sunrise water system an additional 12.4 percent (decrease in water loss from 19.5 percent to 17.08 percent).

Although Liberty Bella Vista is making considerable progress in reducing its Southern Sunrise water systems water loss, it still remains above the acceptable limit of 10 percent. Therefore, Staff recommends that Liberty Bella Vista monitor the Southern Sunrise water system for an additional 12-month period to prepare an updated water loss report. If the reported water loss remains above 10 percent, Liberty Bella Vista shall submit a water loss reduction report containing a detailed analysis and plan to reduce its water loss to 10 percent or less. If Liberty Bella Vista believes it is not cost effective to reduce water loss to 10 percent or less, it shall submit a detailed cost benefit analysis to support its opinion. In no case shall Liberty Bella Vista continue to allow water loss to be greater than 15 percent. The water loss reduction report or the detailed cost benefit analysis, whichever is submitted, shall be docketed as a compliance item within 18 months from the effective date of an order issued in this proceeding.

5) *Water System Analysis*

a) City & South Water Systems

During the peak month, June 2014, the City & South water systems combined were serving 8,589 connections when Liberty Bella Vista reported 106,825,826 gallons of water sold. Average daily demand for the month of June 2014 was determined to be 3,560,861 gpd, while average daily demand per connection was determined to be 415 gpd. Staff concludes that the City & South water systems combined have adequate production and storage capacity to serve the present customer base and any reasonable growth.

b) Northern Sunrise Water System

During the peak month, June 2014, the Northern Sunrise water system (Mustang/Crystal & Coronado/Sierra Sunset systems combined) was serving 339 connections when Liberty Bella Vista reported 3,362,805 gallons of water sold. Average daily demand for the month of June 2014 was determined to be 112,094 gpd, while average daily demand per connection was determined to be 331 gpd. Staff concludes that the Northern Sunrise water system (Mustang/Crystal & Coronado/Sierra Sunset systems combined) has adequate production and storage capacity to serve the present customer base and any reasonable growth.

c) Southern Sunrise Water System

During the peak month, June 2014, the Southern Sunrise water system (Cochise/Horseshoe & Miracle Valley systems combined) was serving 795 connections when Liberty Bella Vista reported 7,142,503 gallons of water sold. Average daily demand for the month of June 2014 was determined to be 283,083 gpd, while average daily demand per connection was determined to be 299 gpd. Staff concludes that the Southern Sunrise water system (Cochise/Horseshoe & Miracle Valley systems combined) has adequate production and storage capacity to serve the present customer base and any reasonable growth.

D. GROWTH

Table X below and Figure 58, located in the figure section of this report, show Liberty Bella Vista's City & South, Northern Sunrise, and Southern Sunrise water system customer growth from 2011 thru 2015 based on its service connection data.⁸ With the exception of 2012, Liberty Bella Vista experienced gradual growth from 2011 to 2015, gaining approximately 232 connections (1.24 percent increase) for an average of 58 connections per year. Due to the uncertain outcome of the federal government "General Stream Adjudication" issue, Liberty Bella Vista is unable to project future growth in its Sierra Vista service area. As a result, Liberty Bella Vista does not anticipate an increase in growth in the immediate future, and expects customer connections (2016 – 2017) to remain the same as 2015.

Table X. Liberty Bella Vista Actual and Projected Growth					
Month/Year	City/South Water System	Northern Sunrise Water System	Southern Sunrise Water System	Total Number of Customers (Active Meters)	Source
	Number of Customers (Active Meters)				
December – 2011	8,473	341	798	9,612	Connection Data
December – 2012	8,539	331	796	9,666	Connection Data
December – 2013	8,512	336	796	9,644	Connection Data
December – 2014	8,648	337	777	9,762	Connection Data

⁸ Customer connection data provided in email from Gerry Becker, Manager – Rates and Regulatory, Liberty Utilities – South, dated March 17, 2016.

December – 2015	8,713	337	794	9,844	Connection Data
December – 2016	8,713	337	794	9,844	No Projected Growth
December – 2017	8,713	337	794	9,844	No Projected Growth

E. ADEQ COMPLIANCE

1) *Compliance Status*

a) City & South Water Systems

ADEQ regulates the City & South water systems under ADEQ Public Water System Identification (“PWS ID”) No. 04-02-010/02-007, respectively. On March 21, 2013, ADEQ inspected the City water system, and on April 3, 2014 ADEQ inspected the South water system. Based on the ADEQ inspection report, no major deficiencies were found in the operation, maintenance, or certified operator status of the City & South water systems.

According to the ADEQ Drinking Water Compliance Status Report (“CSR”), dated February 3, 2016, the City & South water systems are currently delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.

b) Northern Sunrise Water System

ADEQ regulates the Northern Sunrise water system’s Coronado/Sierra Sunset and Mustang/Crystal systems under ADEQ PWS ID No. 04-02-013 and 04-02-054, respectively. On May 30, 2013, ADEQ inspected the Northern Sunrise Coronado/Sierra Sunset and Mustang/Crystal systems. Based on the ADEQ inspection report, no major deficiencies were found in the operation, maintenance, or certified operator status of the water systems.

According to the ADEQ Drinking Water CSR, dated February 3, 2016, the Northern Sunrise water system is currently delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.

c) Southern Sunrise Water System

ADEQ regulates the Southern Sunrise water system’s Cochise/Horseshoe and Miracle Valley systems under ADEQ PWS ID No. 04-02-011 and 04-02-023, respectively. On May 30, 2013, ADEQ inspected the Southern Sunrise Cochise/Horseshoe and Miracle Valley systems. Based on the ADEQ inspection report, no major deficiencies were found in the operation, maintenance, or certified operator status of the water systems.

According to the ADEQ Drinking Water CSR, dated February 3, 2016, the Southern Sunrise water system is currently delivering water that meets water quality standards required by 40 CFR 141

(National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.

2) *Water Monitoring and Testing Expenses*

Liberty Bella Vista's water monitoring and testing expenses are separated among its six (6) water systems, which include the City & South water systems, Northern Sunrise water systems (Coronado/Sierra Sunset and Mustang/Crystal systems), and the Southern Sunrise water systems (Cochise/Horseshoe and Miracle Valley systems). The City & South, Northern Sunrise, and Southern Sunrise water system monitoring and testing expenses are shown in Table X, Y, and Z, respectively. The combined monitoring and testing expenses for the water systems are shown in Table AA.

a) City & South Water Systems

Table X. City & South Water Systems Recommended Water Testing Expenses						
Water Test	Cost Per Test	City System (PWS 04-02-010)		South System (PWS No. 04-02-007)		Total Annual Cost
		Number of Tests	Annual Cost	Number of Tests	Annual Cost	
Total Coliform	\$15	30/Month	\$5,400	3/Month	\$540	\$5,940
Lead & Copper	\$33	30/3 Years	\$330	10/3 Years	\$110	\$440
Disinfection by Products TTHM's	\$90	2/Year	\$180	2/Year	\$180	\$360
Disinfection by Products HAA5's	\$130	2/Year	\$260	2/Year	\$260	\$520
Inorganic Contaminants ("IOCs")	\$259	14/9 Years	\$403	7/9 Years	\$0 (MAP)	\$403
IOCs	\$259	1/3 Years	\$86	4/3 Years	\$0 (MAP)	\$86
Synthetic Organic Contaminants ("SOC's")	\$2,380	30/3 Years	\$23,800	9/9 Years	\$0 (MAP)	\$23,800
SOCs	\$2,380	0	\$0	5/3 Years	\$0 (MAP)	\$0
Volatile Organic Contaminants ("VOCs")	\$145	14/6 Years	\$341	7/6 Years	\$0 (MAP)	\$341
VOCs	\$145	1/3 Years	\$49	1/3 Years	\$0 (MAP)	\$49
VOCs	\$145	0	\$0	6/Year	\$0 (MAP)	\$0
Radiochemicals	\$430	10/9 Years	\$478	1/9 Years	\$0 (MAP)	\$478
Radiochemicals	\$430	5/6 Years	\$358	8/6 Years	\$0 (MAP)	\$358
Radiochemicals	\$430	0	\$0	1/3 Years	\$0 (MAP)	\$0
Radiochemicals	\$430	0	\$0	4/Year	\$0 (MAP)	\$0
Nitrate	\$15	15/Year	\$225	11/Year	\$0 (MAP)	\$225
Nitrite	\$15	15/9 Years	\$25	11/9 Years	\$0 (MAP)	\$25
Asbestos	\$165	15/9 Years	\$275	11/9 Years	\$0 (MAP)	\$275

UCMR3 - EPDS	\$1,100	6/Year	\$6,600	N/A	\$0	\$6,600
UCMR3 - DS	\$360	6/Year	\$2,160	N/A	\$0	\$2,160
MAP			\$0		\$2,265	\$2,265
Total			\$40,970		\$3,355	\$44,325

b) Northern Sunrise Water System

Table Y. Northern Sunrise Water System Recommended Water Testing Expenses						
Water Test	Cost Per Test	Coronado/Sierra Sunset System (PWS 04-02-013)		Mustang/Crystal System (PWS No. 04-02-054)		Total Annual Cost
		Number of Tests	Annual Cost	Number of Tests	Annual Cost	
Total Coliform	\$15	1/Month	\$180	1/Month	\$180	\$360
Lead & Copper	\$33	10/3 Years	\$110	5/3 Years	\$55	\$165
Disinfection by Products TTHM's	\$90	1/Year	\$90	1/3 Years	\$30	\$120
Disinfection by Products HAA5's	\$130	1/Year	\$130	1/3 Years	\$43	\$173
Inorganic Contaminants ("IOCs")	MAP	2/9 Years	\$0	1/9 Years	\$0	\$0
IOCs	MAP	0	\$0	1/3 Years	\$0	\$0
Synthetic Organic Contaminants ("SOC's")	MAP	2/9 Years	\$0	1/9 Years	\$0	\$0
SOCs	MAP	0	\$0	4/3 Years	\$0	\$0
Volatile Organic Contaminants ("VOCs")	MAP	2/6 Years	\$0	5/Year	\$0	\$0
Radiochemicals	MAP	2/6 Years	\$0	2/6 Years	\$0	\$0
Nitrate	MAP	2/Year	\$0	2/Year	\$0	\$0
Nitrite	MAP	2/9 Years	\$0	2/9 Years	\$0	\$0
Asbestos	MAP	2/9 Years	\$0	2/9 Years	\$0	\$0
MAP			\$844		\$600	\$1,444
Total			\$1,354		\$908	\$2,262

c) Southern Sunrise Water System

Table Z. Southern Sunrise Water System Recommended Water Testing Expenses						
Water Test	Cost Per Test	Cochise/Horseshoe System (PWS 04-02-011)		Miracle Valley System (PWS No. 04-02-023)		Total Annual Cost
		Number of Tests	Annual Cost	Number of Tests	Annual Cost	
Total Coliform	\$15	2/Month	\$360	1/Month	\$180	\$540
Lead & Copper	\$33	10/3 Years	\$110	10/3 Years	\$110	\$220

Disinfection by Products TIHM's	\$90	1/Year	\$90	0	\$0	\$90
Disinfection by Products HAA5's	\$130	1/Year	\$130	0	\$0	\$130
Inorganic Contaminants ("IOCs")	MAP	2/9 Years	\$0	2/9 Years	\$0	\$0
Synthetic Organic Contaminants ("SOC's")	MAP	2/9 Years	\$0	1/9 Years	\$0	\$0
SOCs	MAP	0	\$0	1/3 Years	\$0	\$0
Volatile Organic Contaminants ("VOCs")	MAP	2/6 Years	\$0	2/6 Years	\$0	\$0
Radiochemicals	MAP	2/6 Years	\$0	1/6 Years	\$0	\$0
Radiochemicals	MAP	0	\$0	1/3 Years	\$0	\$0
Nitrate	MAP	2/Year	\$0	2/Year	\$0	\$0
Nitrite	MAP	2/9 Years	\$0	2/9 Years	\$0	\$0
Asbestos	MAP	2/9 Years	\$0	2/9 Years	\$0	\$0
MAP			\$1,828		\$955	\$2,783
Total			\$2,518		\$1,245	\$3,763

d) City, South, Northern Sunrise, & Southern Sunrise Water Systems

Table AA. City, South, Northern Sunrise, & Southern Sunrise Water Systems Recommended Water Testing Expenses				
Liberty Bella Vista Water Systems	PWS Number	Annual Costs	MAP Costs	Total Annual Costs
<i>City & South</i>				
City	04-02-010	\$40,970	\$0	\$40,970
South	04-02-007	\$1,090	\$2,265	\$3,355
<i>Northern Sunrise</i>				
Coronado/Sierra Sunset	04-02-013 & 04-02-055	\$510	\$844	\$1,354
Mustang/Crystal	04-02-054	\$308	\$600	\$908
<i>Southern Sunrise</i>				
Cochise/Horseshoe	04-02-011	\$690	\$1,828	\$2,518
Miracle Valley	04-02-023	\$290	\$955	\$1,245
Total Costs		\$43,858	\$6,492	\$50,350

In its Income Statement, line item 16 (Contractual Services – Testing), Liberty Bella Vista reported \$89,695 in water testing expenses for the 2014 test year. However, upon reviewing Liberty Bella Vista's water testing invoices it was determined that approximately \$6,086 in additional water testing expenses (MAP Expenses) were entered in Line Item 24 (Miscellaneous). Consequently, Liberty Bella Vista's water testing expenses during the test year were actually \$95,781 (\$89,695 + \$6,086).

Staff reviewed, re-evaluated, and recalculated the water monitoring and testing expenses and determined the adjusted annual water testing expenses to be \$50,350, as represented in Table AA. Liberty Bella Vista's test year costs were greater than the adjusted expenses primarily due to IOC, VOC, SOC, and Lead & Copper testing that came due during the test year for the City water system. These tests are not generally required to be monitored on an annual basis. Depending on the test, as indicated in Table X, the frequency can vary from once every 3, 6, or 9 years. Therefore, Staff recommends the annual water testing expenses of \$50,350 be used for purposes of this proceeding.

F. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE

The Liberty Bella Vista City & South, Northern Sunrise, and Southern Sunrise water system service areas are not located within an Active Management Area ("AMA"). According to the ADWR water provider compliance report, dated January 19, 2016, Liberty Bella Vista's waster systems are in compliance with its requirements governing water providers and/or community water systems.

G. ARIZONA CORPORATION COMMISSION COMPLIANCE

A check of the Utilities Division Compliance Section database showed that Liberty Bella Vista's City & South, Northern Sunrise, and Southern Sunrise water systems have no delinquent Commission compliance items.⁹

H. DEPRECIATION RATES

Staff's typical and customary depreciation rates, which vary by National Association of Regulatory Utility Commissioners ("NARUC") plant categories, are illustrated in Table AB. These rates represent typical and customary values within a range of anticipated equipment life. Liberty Bella Vista is not proposing any changes to its current depreciation rates, which are the same as Staff's typical rates shown in Table AB. Staff recommends that Liberty Bella Vista continue to use the depreciation rates listed under "Staff's Recommended Rates" in Table AB.

Table AB. Depreciation Rate Table			
NARUC Acct. No.	Depreciable Plant	Staff's Typical & Recommended Rates	
		Service Life (Years)	Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00

⁹ Per Compliance Section email dated January 27, 2016

310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.50
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.00
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc. Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
347.1	Compressed Natural Gas System	30	3.33
348	Other Tangible Plant	10	10.00

I. OTHER ISSUES

1) *Service Line and Meter Installation Charges*

Liberty Bella Vista has proposed changes to its existing service line and meter installation charges.¹⁰ The installation charges, listed in Table AC, are refundable advances. For all service line installation and meter charges, Liberty Bella Vista is requesting the charges be “At Cost” with the intention of being consistent with Rio Rico Water.¹¹ Rio Rico Water, located in Southern Arizona, is another water system owned by Liberty Utilities Corporation. Staff recommends approval of Liberty Bella Vista’s proposed service line and meter installation charges included in Table AC. Staff further recommends the service line and meter installation charges listed under “Staff’s Recommendations” in Table AC be adopted.

¹⁰ SWC’s current charges were approved in Decision No. 72251, effective April 7, 2011.

¹¹ Rio Rico Utilities (Water) “At-Cost” Meter and Service Line Installation Charges were approved in Decision No. 73996, dated July 30, 2013.

Table AC. Liberty Bella Vista Service Line and Meter Installation Charges									
Meter Size	Liberty Bella Vista Current Charges			Liberty Bella Vista Proposed Charges			Staff's Recommendations		
	Service Line Charge	Meter Charge	Total Charge	Service Line Charge	Meter Charge	Total Charge	Service Line Charge	Meter Charge	Total Charge
5/8 x 3/4-inch	\$1,765	\$105	\$1,870	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
3/4-inch	\$1,765	\$180	\$1,945	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
1-inch	\$1,765	\$240	\$2,005	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
1-1/2-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
2-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
3-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
4-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
6-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
8-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
10-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost
12-inch	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost	At Cost

2) *Curtailment Tariff*

Liberty Bella Vista's City & South, Northern Sunrise, and Southern Sunrise water systems have approved Curtailment Tariffs on file with the Commission. The City/South water system tariff became effective January 20, 2005. The Northern Sunrise and Southern Sunrise water system Tariffs' became effective on April 4, 2007. In its application, Liberty Bella Vista is proposing to combine the three (3) Tariffs into one (1) standardized Tariff that also includes its proper name, Liberty Utilities (Bella Vista Water) Corporation. However, the proposed tariff that Liberty Bella Vista submitted was incomplete. Liberty Bella Vista submitted an updated Curtailment Tariff in response to Staff Data Request ("DR") No. 6. Staff recommends that the updated Curtailment Tariff submitted in response to Staff DR No. 6, as shown in Attachment 2, be approved.

3) *Cross-Connection/ Backflow Prevention Tariff*

Liberty Bella Vista has an approved Cross-Connection/Backflow Prevention Tariff on file with the Commission. This tariff became effective September 19, 2013. In its application, Liberty Bella Vista is proposing to update its current tariff to reflect its current name, Liberty Utilities (Bella Vista Water) Corporation (Attachment 1). Staff recommends that the Cross-Connection/Backflow Prevention Tariff submitted with its application, as shown in Attachment 1, be approved.

4) *Off-Site Hook-Up Fee*

Liberty Bella Vista currently has an approved Off-Site Hook-up Fee Tariff on file with the Commission. The tariff became effective April 7, 2011, per Decision No. 72251. In its application, Liberty Bella Vista proposed increases to its current off-site hook-up fees, which are indicated in

Table AD. However, Liberty Bella Vista was unable to provide documentation supporting its proposed increases. Therefore, Staff recommends that Liberty Bella Vista continue to use the hook-up fees listed under “Staff’s Recommendations” in Table AD.

Table AD. Liberty Bella Vista Off-Site Hook-Up Fees				
Meter Size (inches)	AWWA Size Factor	Liberty Bella Vista Current Fees	Liberty Bella Vista Proposed Fees	Staff’s Recommendation
5/8 x 3/4	1	\$1,600	\$1,800	\$1,600
3/4	1.5	\$2,400	\$2,700	\$2,400
1	2.5	\$4,000	\$4,500	\$4,000
1-1/2	5	\$8,000	\$9,000	\$8,000
2	8	\$12,800	\$14,400	\$12,800
3	16	\$25,600	\$28,800	\$25,600
4	25	\$40,000	\$45,000	\$40,000
6 or Larger	50	\$80,000	\$90,000	\$80,000

5) *Best Management Practices (“BMP”) Tariff*

Currently, Liberty Bella Vista has five (5) BMP Tariffs on file with the Commission. The five (5) BMP’s were approved per Decision No. 72530, August 17, 2014.

6) *Post-Test Year (“PTY”) Plant*

In its application, Liberty Bella Vista requested PTY plant adjustments, through November 30, 2015, in the amount of \$872,772. In response to Data Request (“DR”) TBH 4.17, Liberty Bella Vista provided an adjusted balance, through December 31, 2015, to its original PTY balance via its response to the Residential Utility Consumer Office (“RUCO”) DR 2.10. Staff witness Teresa Hunsaker will address PTY plant adjustment expenses in her testimony.

Liberty Bella Vista’s PTY plant adjustments are separated into two (2) categories: 1) Capital Improvement Projects, which are major capital investment projects that are generally budgeted and planned, and 2) Blanket Projects, which are routine capital improvement projects that generally include the installation of water mains, hydrants, valves, meters, service lines, small pumps and motors, and other items considered to be general equipment.

a) City & South Water Systems

Liberty Bella Vista has requested that six (6) Capital Projects be included as PTY Plant Additions for its City & South water systems. Each capital project, listed in Table AE, was found to be in-service and used and useful during the plant facilities site inspection on January 13, 14 & 21, 2016.

Table AE. City & South Water Systems Post Test Year Capital Improvement Projects			
Job Number	NARUC Account No.	Project Name	Project Description
8500-10014-002504	304	Office Solar System	Solar Panels, Antenna, & Modem
8500-10014-002510	310	Office Solar System	Power Generation Equipment
8500-100014-002636	347.1	Misc. Equipment	Compressed Natural Gas Facility
8500-14001-34001	340.1	Computers & Software	Installation of three (3) Security Panic Buttons
8500-15018-3040	304	Structures & Improvements	Motor Control Unit Upgrades at Nichols & Broken Arrow BPS's
8500-15019-3450	345	Power Operated Equipment	Purchase of Backhoe

Liberty Bella Vista has requested that seventeen (17) PTY Blanket Projects, listed in Table AF, be included as PTY Plant Additions for its City & South water systems. The blanket projects were found to be in-service and used and useful during the plant facilities site inspection on January 13, 14 & 21, 2016.

Table AF. City & South Water Systems Post Test Year Blanket Projects			
Job Number	NARUC Account No.	Project Name	Project Description
8500-15002-34000 8500-15002-34001	340	Equipment: Replacement	Rebuild Meter Reading Handheld, & Server Room A/C Unit Installation
8500-15003-34300 8500-15004-34300	343	Tools: New & Replacements	Shovels, Hydrant Wrenches, Valve Keys, Rakes, Handsaws, Gauges, Socket Set, & Hoses
8500-15005-34300 8500-15006-34300	343	New & Replacement Safety Equipment	Safety Cones & Eye Wash Valves
8500-15008-33300	333	Service Lines: Replacements	Valves, Couplings, Gaskets, Corporation Stops, Clamps, Saddles, & Wrap
8500-15010-33400	334	Meters: Replacements	Meters (various sizes), Strainers, Risers, Gaskets & Couplings
8500-15012-33500	335	Hydrants: Replacements	2" Hydrant, Break Away Repair Kit, & Mechanical Joint Kit
8500-15013-33100	331	Distribution Main Replacements	Valve Cans, Mechanical Joint Kit, PVC Pipe, Restraint, & Mega Lug
8500-15013-30400	304	Structures & Improvements: Booster Pump Stations	Solenoid Valves
8500-15014-31100	311	Pumping Equipment: Booster Pump Stations	Well Replacement Pumps, Check Valves, Seal Kits, Pressure Relief Valves, Booster Pump Rebuilds, & Air Compressors
8500-15015-30400	304	Structures & Improvements: Electrical	Chlorine Shed (Wild Horse Well Site), & Fence Rebuild (Well No. 15)
8500-15015-31100	311	Pumping Equipment: Wells	Pressure Gauges, Check Valves, Site Glass, Air Reducing Valves, Pressure Relief Valves, & Motor Replacement

8500-15015-32000	320.2	Solution Chemical Feeders: Wells	Chlorine Foot Valves, Clear & Black Tubing, Sample Taps, Injection Valves, & Hose adapters
8500-15016-3040	304	Structures & Improvements: Electrical	Control Wiring @ Rail Oaks Well Site No. 1 & 2, Variable Frequency Drive ("VFD") @ Kings Ranch Well Site, & Booster Pump Controls.
8500-15016-3460	346	Communication Equipment: Electrical	SCADA Module @ Well No. 19, SCADA Rebuild @ (Kings Ranch Well Site), Power Supply for Communication Data, & Reconfigure SCADA @ Well No. 7, 14, 19, & Rail Oaks Wells No. 1 & 2

b) Northern Sunrise Water System

The Northern Sunrise water system did not have any Capital Projects in the PTY. Liberty Bella Vista has requested that ten (10) Blanket Projects, listed in Table AG, be included as PTY Plant Additions for the Northern Sunrise water system. The blanket projects were found to be in-service and used and useful during the plant facilities site inspection on January 13, 14 & 21, 2016.

Table AG. Northern Sunrise Water System Post Test Year Blanket Projects			
Job Number	NARUC Account No.	Project Name	Project Description
8137-15006-34300	343	Equipment: New Safety	Chlorine Transfer Containers
8137-15010-33400	334	Meters: Replacements	Gaskets, Couplings, & Valves
8137-15013-33100	331	Distribution Mains: Replacements	Valves, Valve Cans, Mechanical Joints, Mega Lugs, PVC Pipe, & Barrels
8137-15014-30400	304	Structures & Improvements: Booster Pump Stations	Check Valve
8137-15014-31100	311	Pumping Equipment: Booster Pump Stations	VFD Human Machine Interface ("HMI") replacement
8137-15015-30400	304	Structures & Improvements: Wells	Motor Starter & Heater
8137-15015-30700	307	Wells & Springs: Wells	Liner & Test Pump
8137-15015-31100	311	Pumping Equipment: Wells	Well Replacement Pump
8137-15016-3460	346	Communication Equipment: Electrical	SCADA Pulse Converter & Communication Module

c) Southern Sunrise Water System

The Southern Sunrise water system did not have any Capital Projects in the PTY. Liberty Bella Vista has requested that eleven (11) Blanket Projects, listed in Table AG, be included as PTY Plant Additions for the Southern Sunrise water system. The blanket projects were found to be in-service and used and useful during the plant facilities site inspection on January 13, 14 & 21, 2016.

Table AG. Southern Sunrise Water System Post Test Year Blanket Projects			
Job Number	NARUC Account No.	Project Name	Project Description
8140-15002-34001	340.1	Computers & Software	APC Smart Uninterruptable Power Supply ("UPS")
8140-15005-34300	343	Equipment: Safety	Eye Wash Valves
8140-15008-33300	333	Service Lines: Replacements	Couplings, Saddles, Inserts, Tees, & Valves
8140-15010-33400	334	Meters: Replacements	Valves & Couplings
8140-15013-33100	331	Distribution Mains: Replacements	Valves, Valve Cans, Plugs, Couplings, Mega Lugs, Mechanical Joints, Tees, & PVC Pipe
8140-15014-30400	304	Structures & Improvements: Booster Pump Stations	HMI replacement on VFD & VFD Starter rebuild
8140-15015-30400	304	Structures & Improvements: Wells	Conduit to Reconnect Naranja Wells
8140-15015-30700	307	Wells & Springs: Wells	Well Rehabilitation
8140-15015-31100	311	Pumping Equipment: Wells	Pump Replacement, Control Box @ Naranja Well No.2, Pipe & Fitting for Flushing Naranja Well No. 2

7) *Fair Value Arizona Rate Evaluation ("FARE") Model*

Liberty Bella Vista, in its rate application, is seeking approval from the Commission of its proposed FARE model. The Fare model application will be addressed by Revenue Requirements & Audits Staff witness James Armstrong.

8) *Liberty Bella Vista Water Usage Data Submitted*

In its application, Liberty Bella Vista submitted combined water usage data for each of its six (6) water systems. For example, Bella Vista City and South water usage data (production, sold, and connections) were combined preventing the individual water loss and adequate production & storage capacities to be determined. Combined, the two (2) systems have adequate production and storage capacity, as well as acceptable water loss. However, due to Liberty Bella Vista combining the water usage data, determining if each system has acceptable water loss and adequate production and storage capacities is virtually impossible. Such is the case with the Northern Sunrise (Crystal/Mustang & Coronado/Sierra Sunset systems) and Southern Sunrise (Cochise/Horseshoe & Miracle Valley systems) water systems. Staff recommends that Liberty Bella Vista separate its water usage data for each system within the City, South, Northern Sunrise, and Southern Sunrise water systems going forward.

9) *Reconciliation of NARUC Accounts 330 & 320*

In Liberty Bella Vista's application, Staff determined that Liberty Bella Vista had not properly classified NARUC Accounts 320 and 330 into the appropriate sub-accounts. Staff has been working with Liberty Bella Vista to properly reclassify the accounts. Liberty Bella Vista will be providing information for the reclassification to the sub-accounts through a supplemental response to Staff's

Data Requests TBH 2.22 and TBH 2.23. Staff will make the appropriate adjustments in its Surrebuttal Testimony.

J. FINANCING

On November 2, 2015, Liberty Bella Vista filed a financing application (Docket No. W-02465A-15-0370) requesting approval to borrow \$4,700,000 from Liberty Utilities Company an affiliate of Liberty Bella Vista. The purpose for the loan is for Liberty Bella Vista to rebalance its current capital structure of 89.68 percent equity and 10.32 percent debt to a capital structure consisting of 70 percent equity and 30 percent debt. The Financing application will be addressed by Revenue Requirements & Audits Staff witness Crystal Brown.

FIGURES

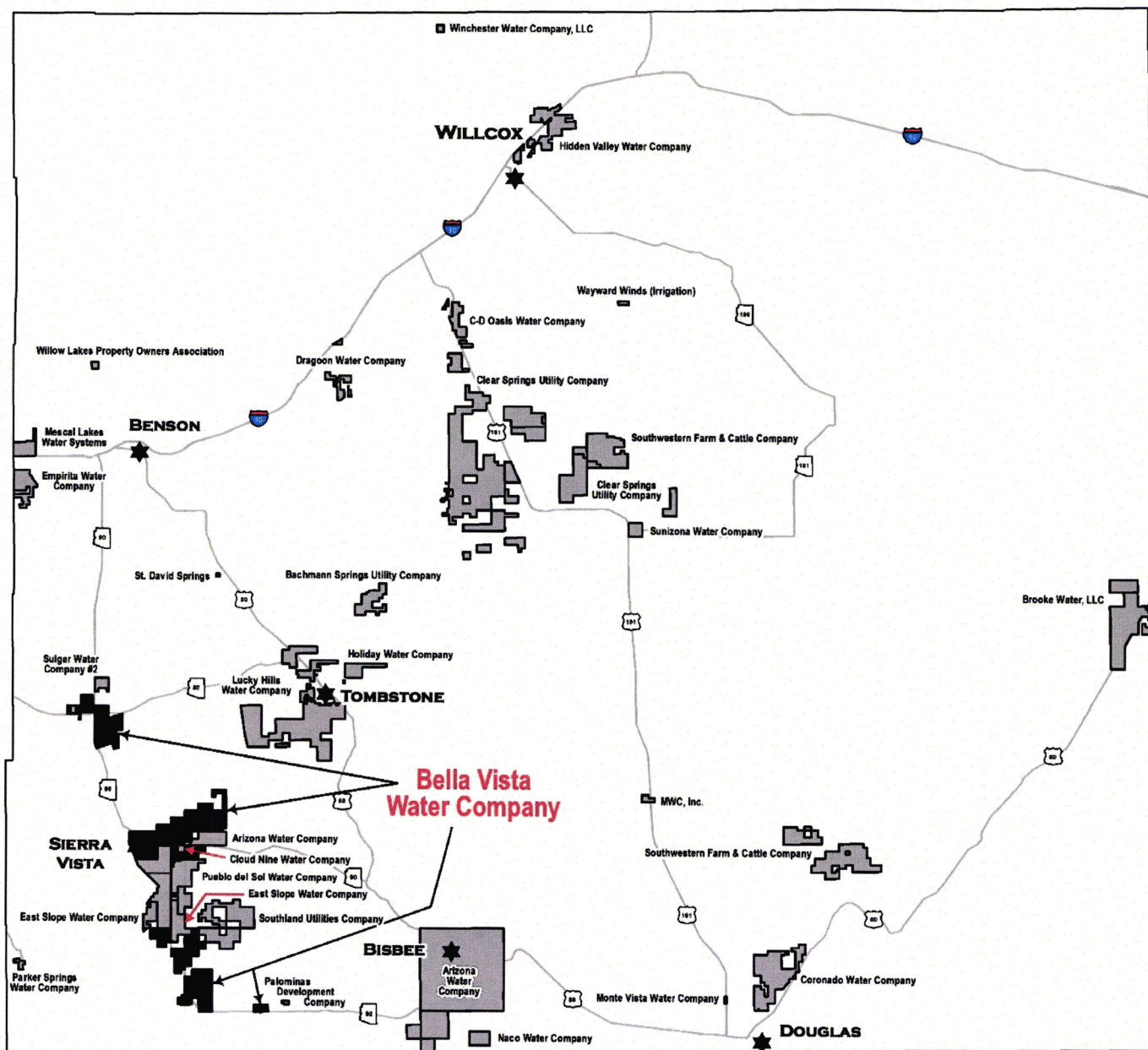


FIGURE 1 – COCHISE COUNTY MAP

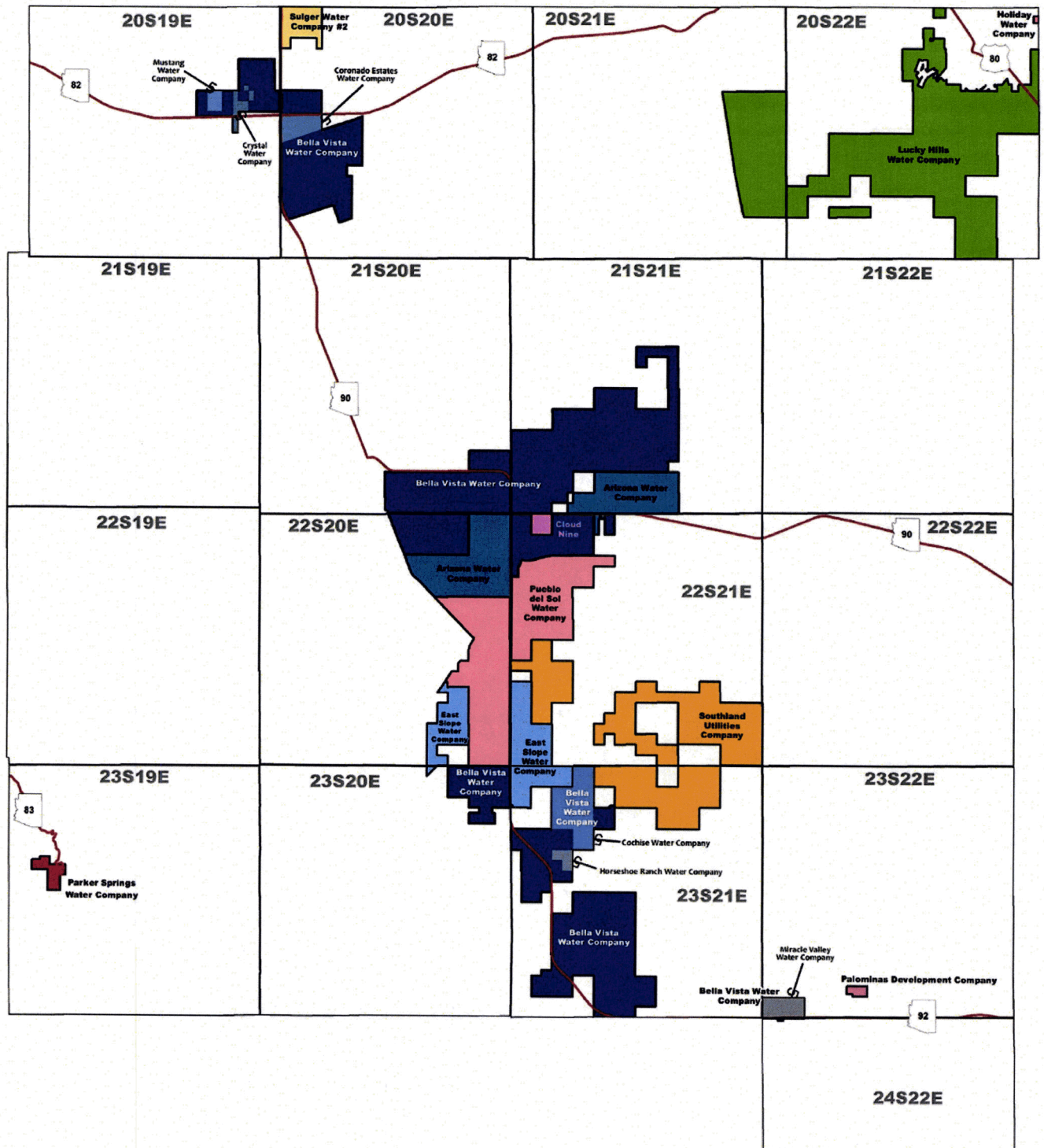


FIGURE 2 – LIBERTY BELLA VISTA CERTIFICATED AREAS

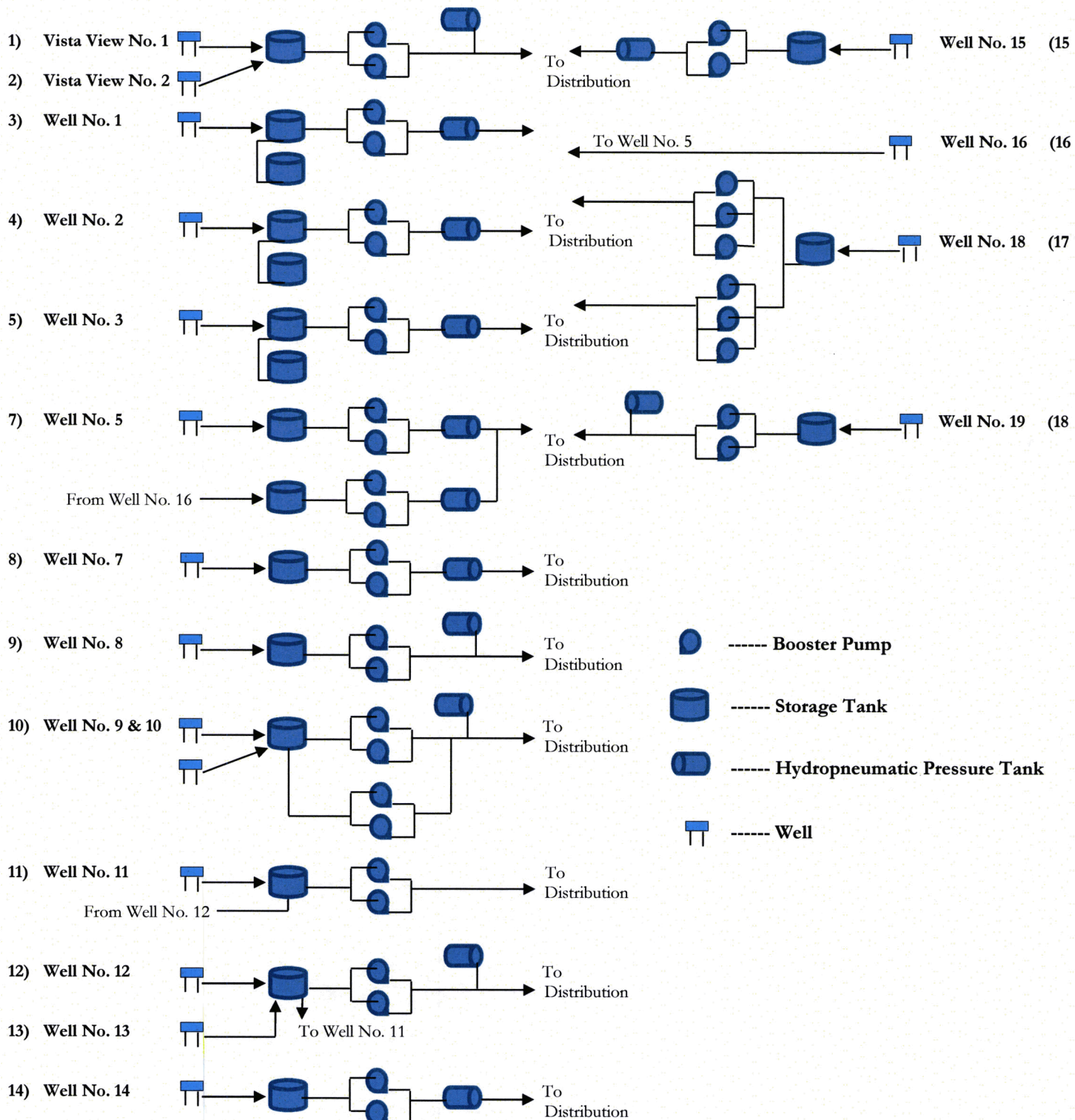


FIGURE 3 – CITY WATER SYSTEM PLANT

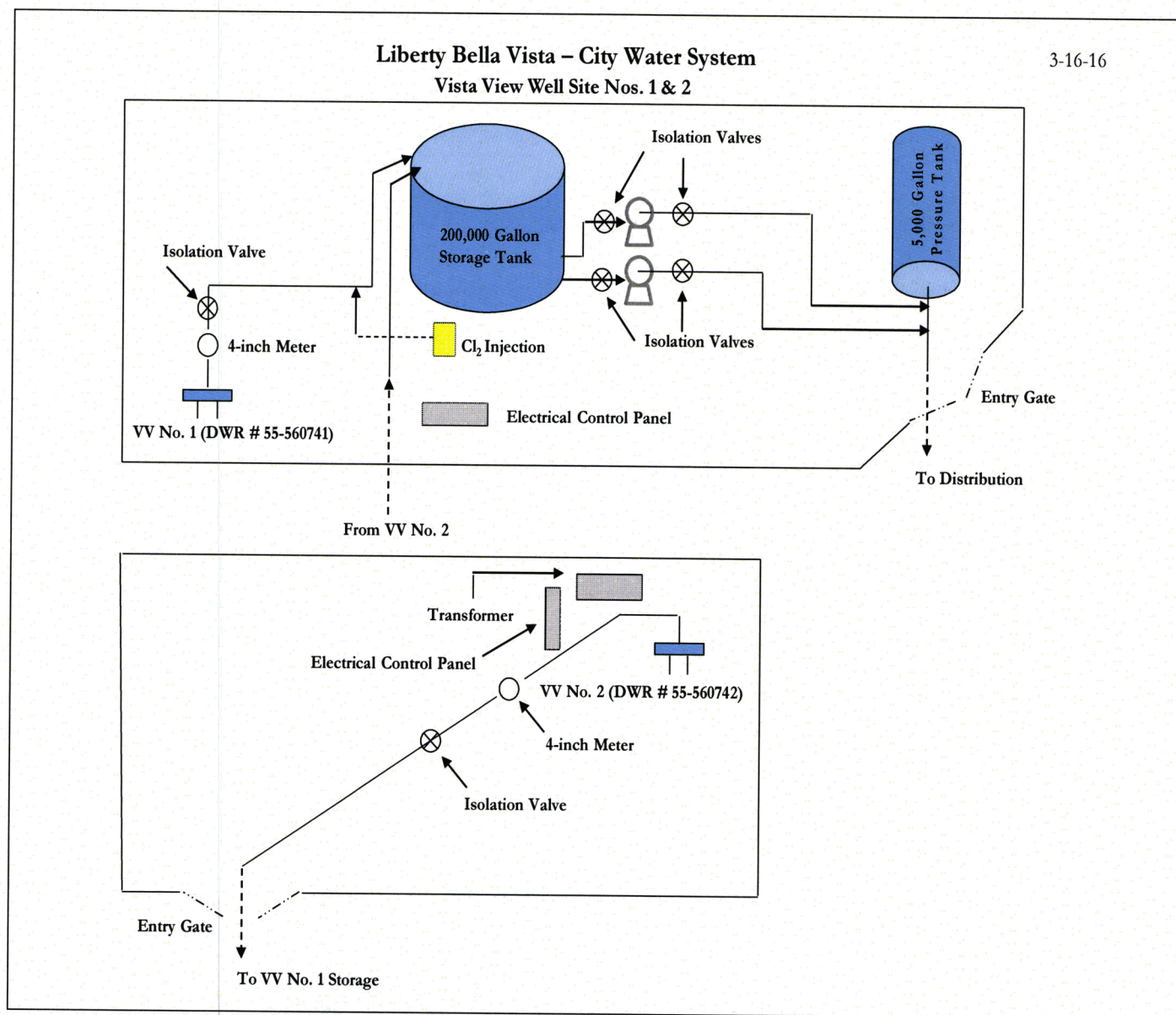


FIGURE 4 – CITY WATER SYSTEM VISTA VIEW WELL SITES NO. 1 & 2

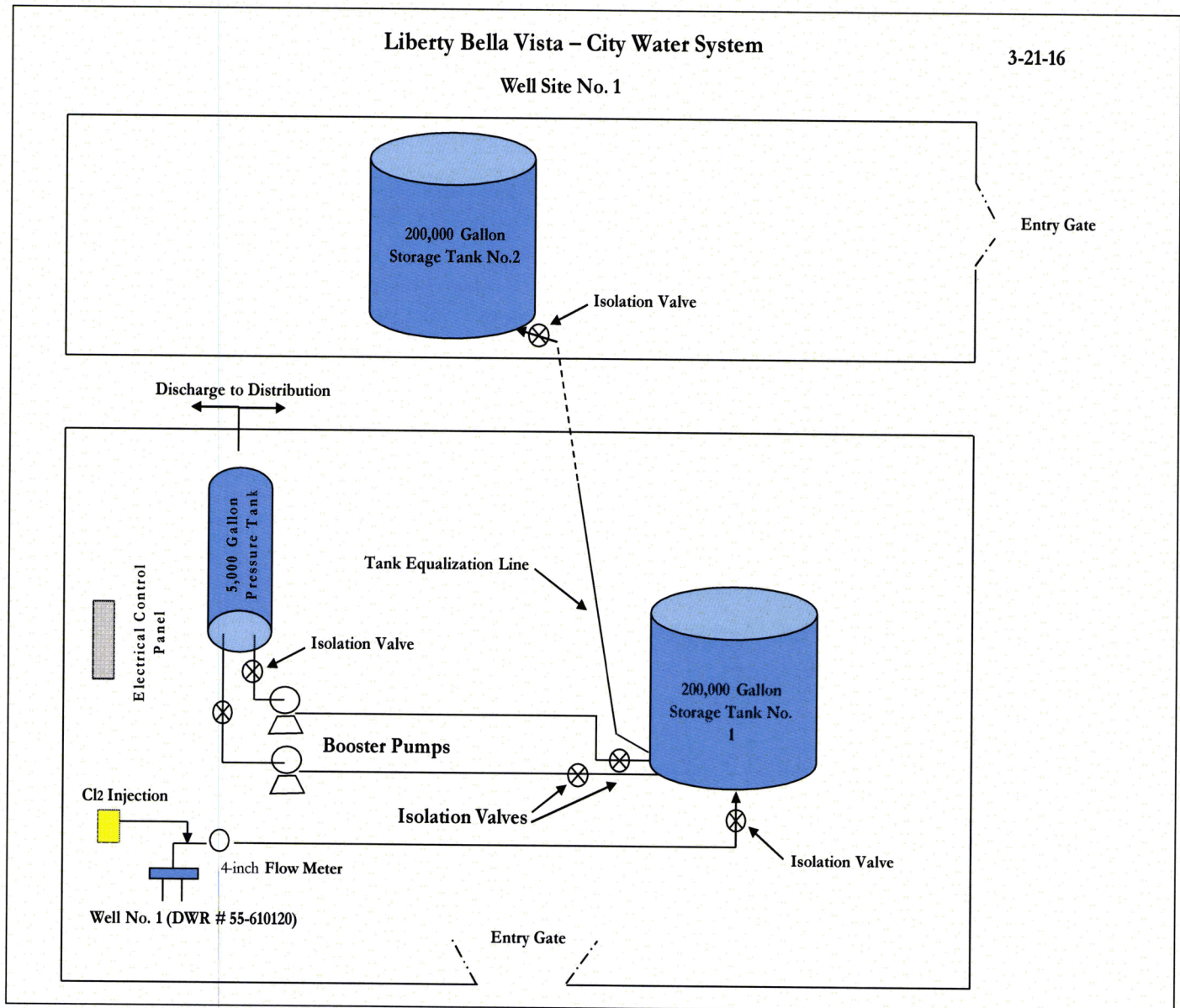


FIGURE 5 – CITY WATER SYSTEM WELL NO. 1

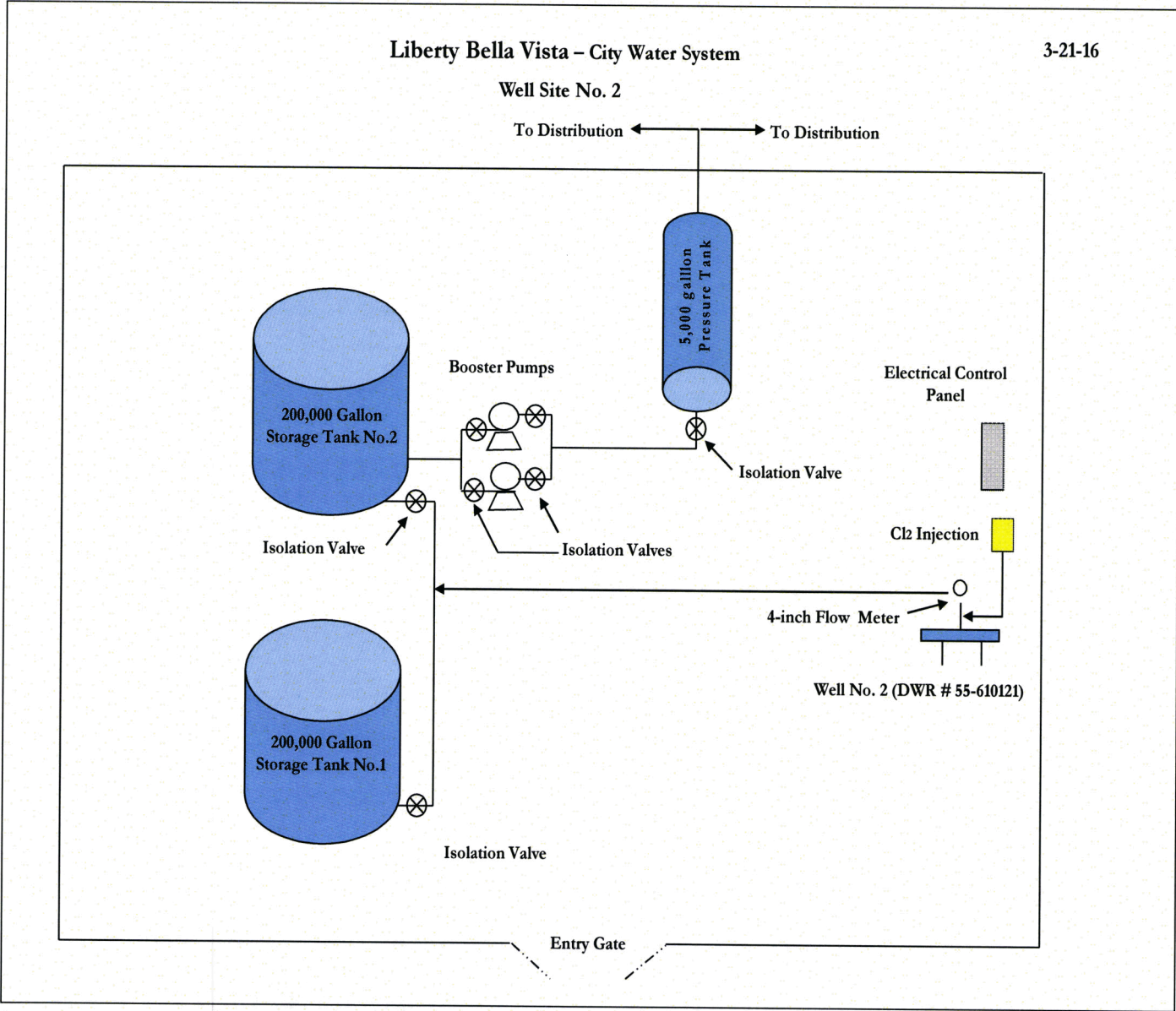


FIGURE 6 – CITY WELL SYSTEM WELL SITE NO. 2

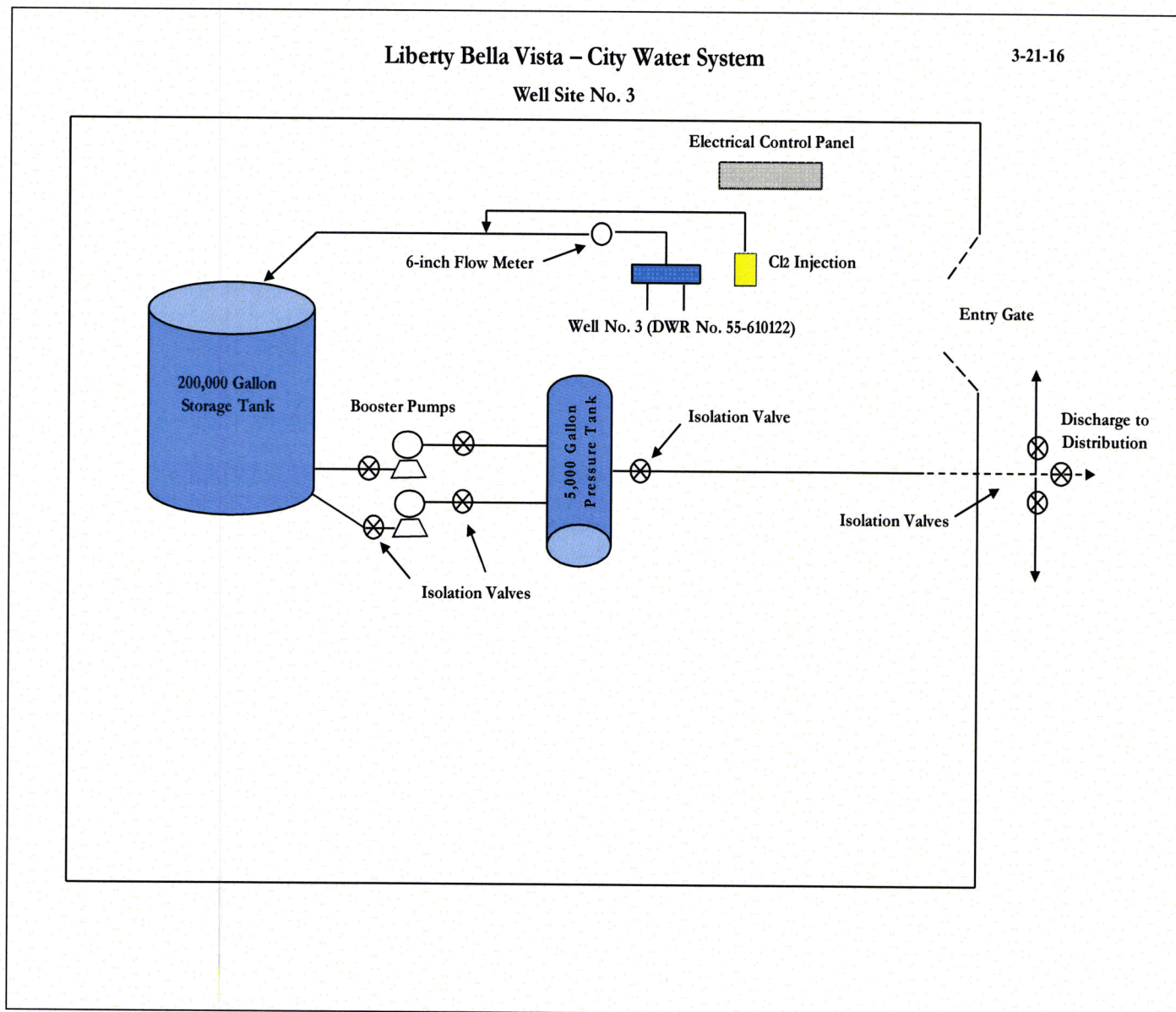


FIGURE 7 – CITY WATER SYSTEM WELL SITE NO. 3

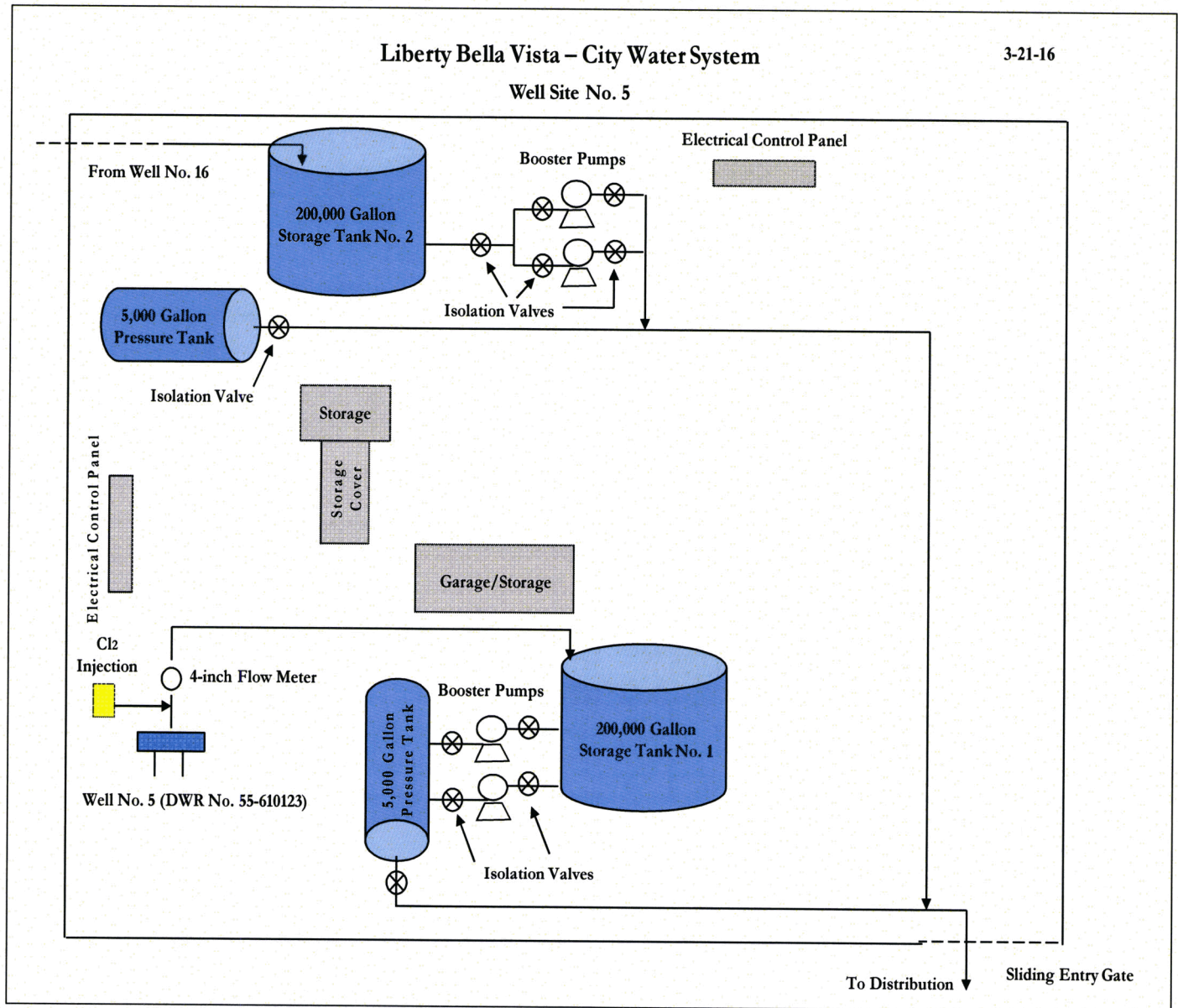


FIGURE 8 – CITY WATER SYSTEM WELL SITE NO. 5

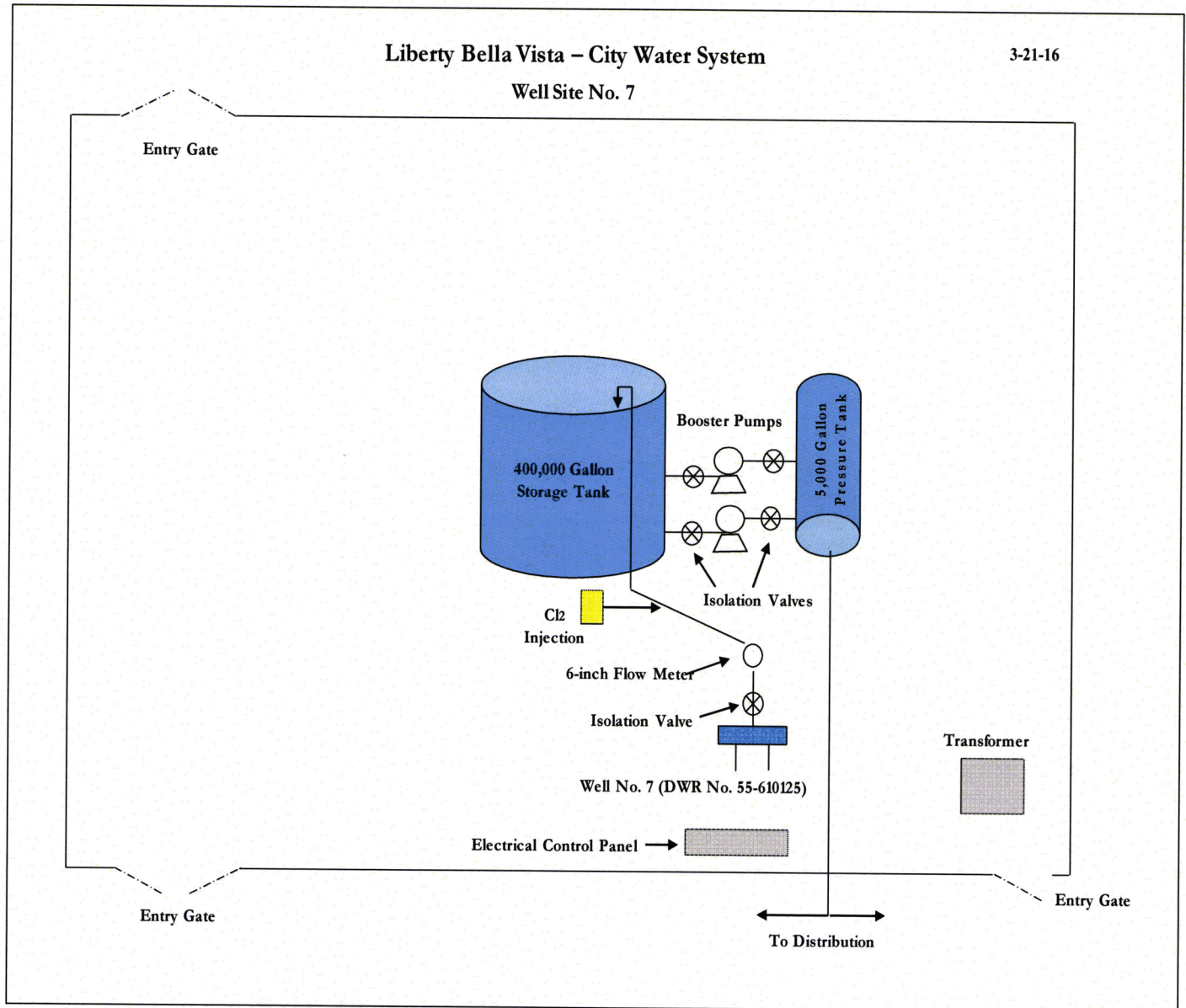


FIGURE 9 – CITY WATER SYSTEM WELL SITE NO. 7

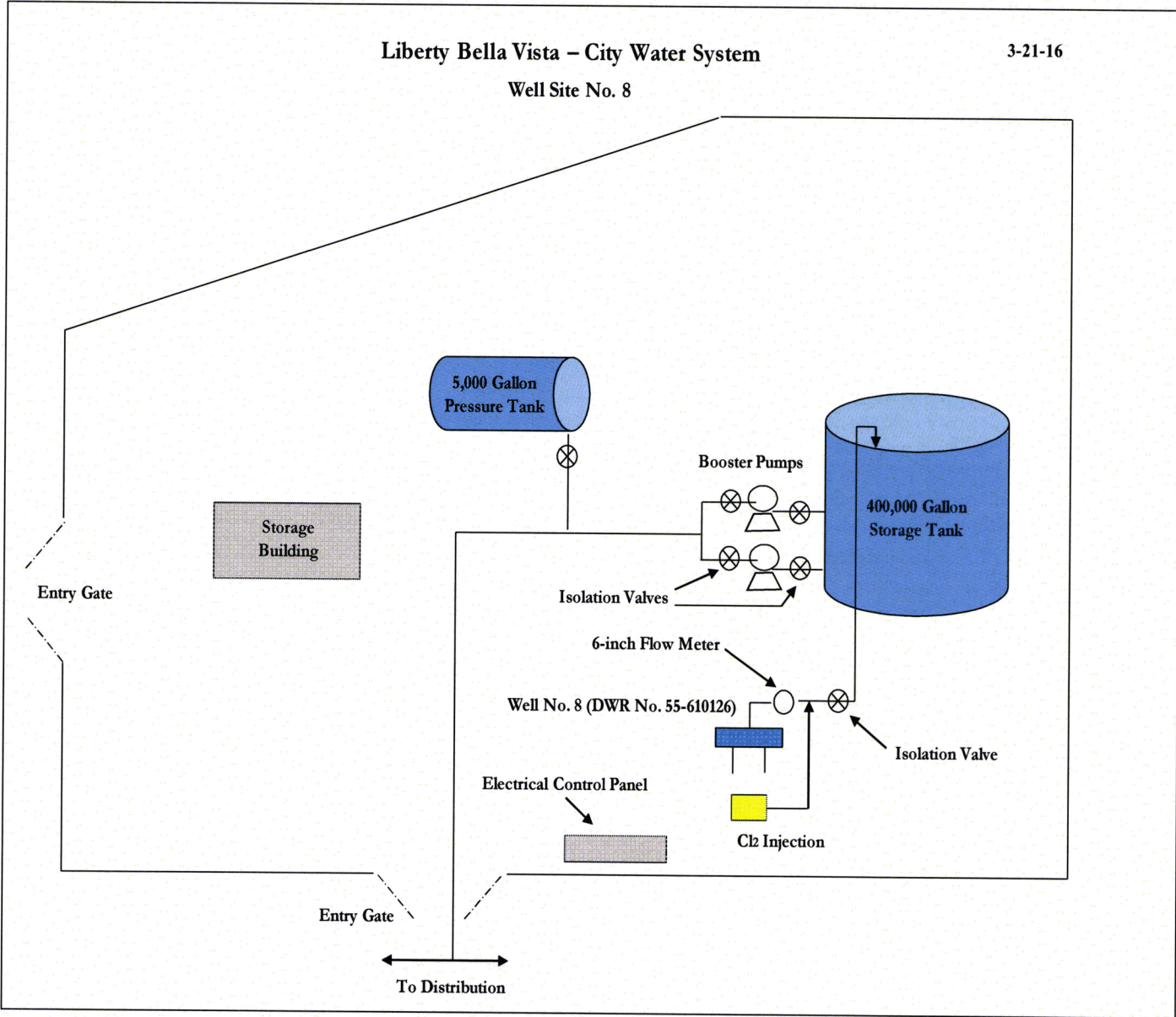


FIGURE 10 – CITY WATER SYSTEM WELL SITE NO. 8

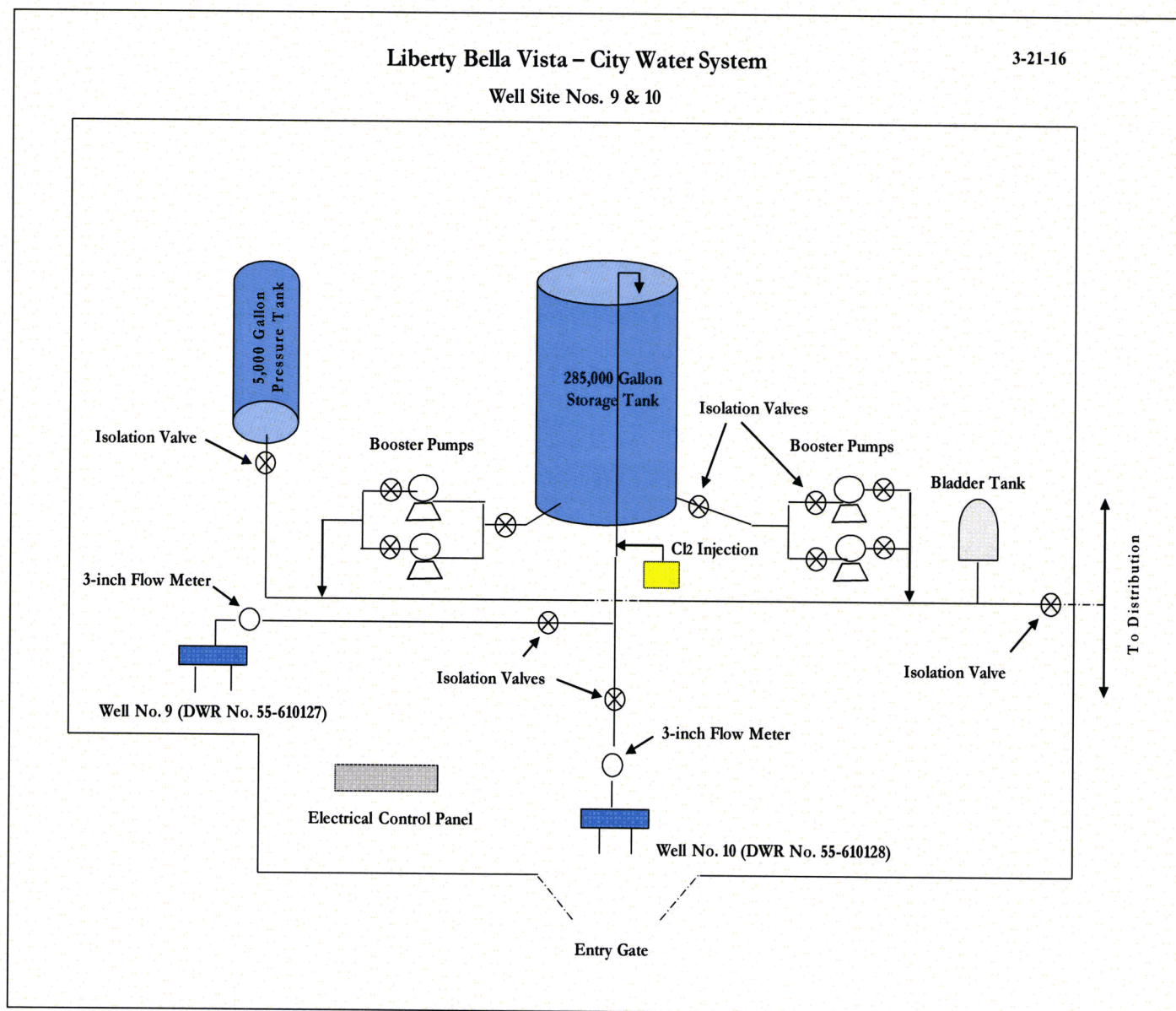


FIGURE 11 – CITY WATER SYSTEM WELL SITE NOS. 9 & 10

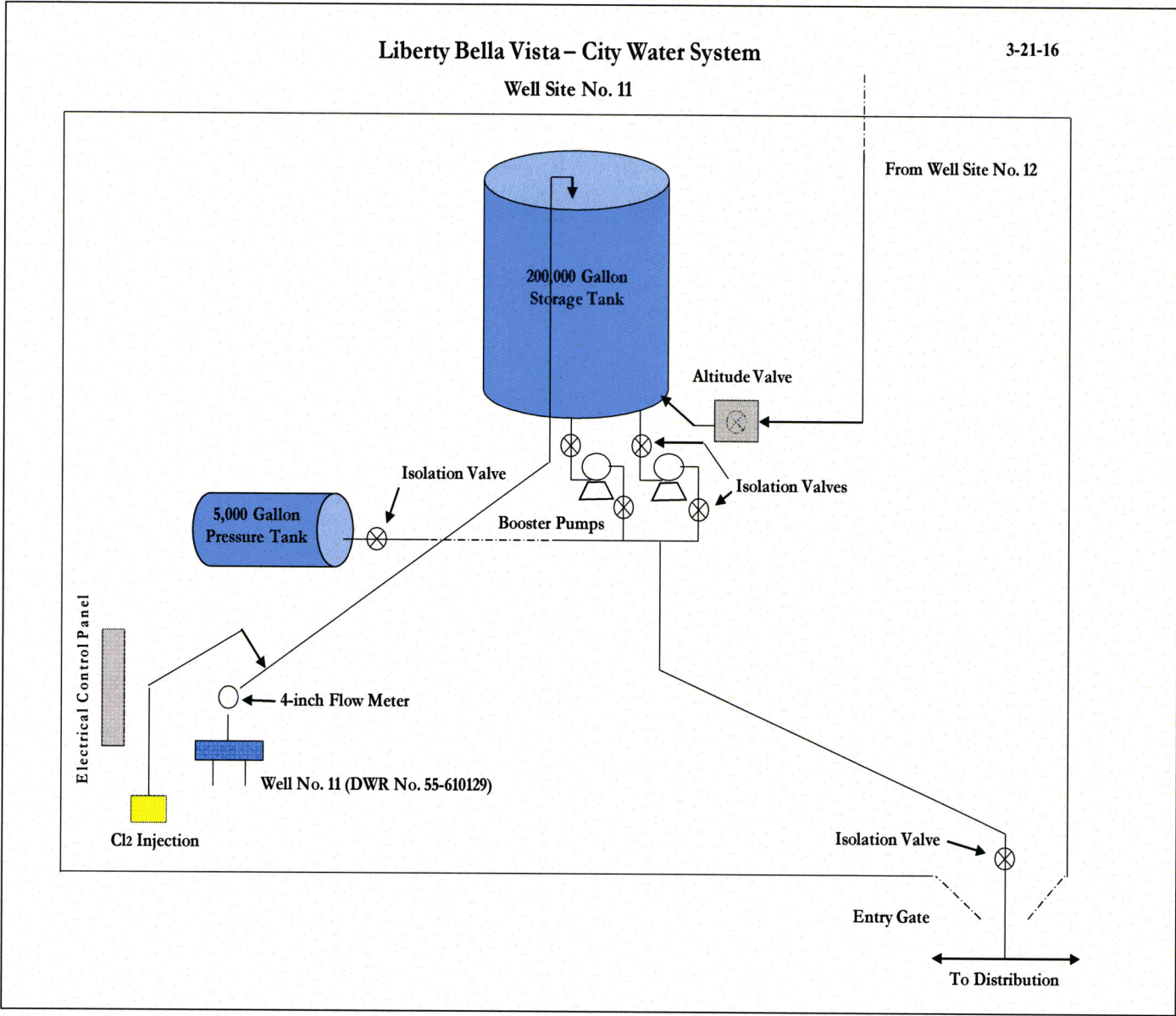


FIGURE 12 – CITY WATER SYSTEM WELL SITE NO. 11

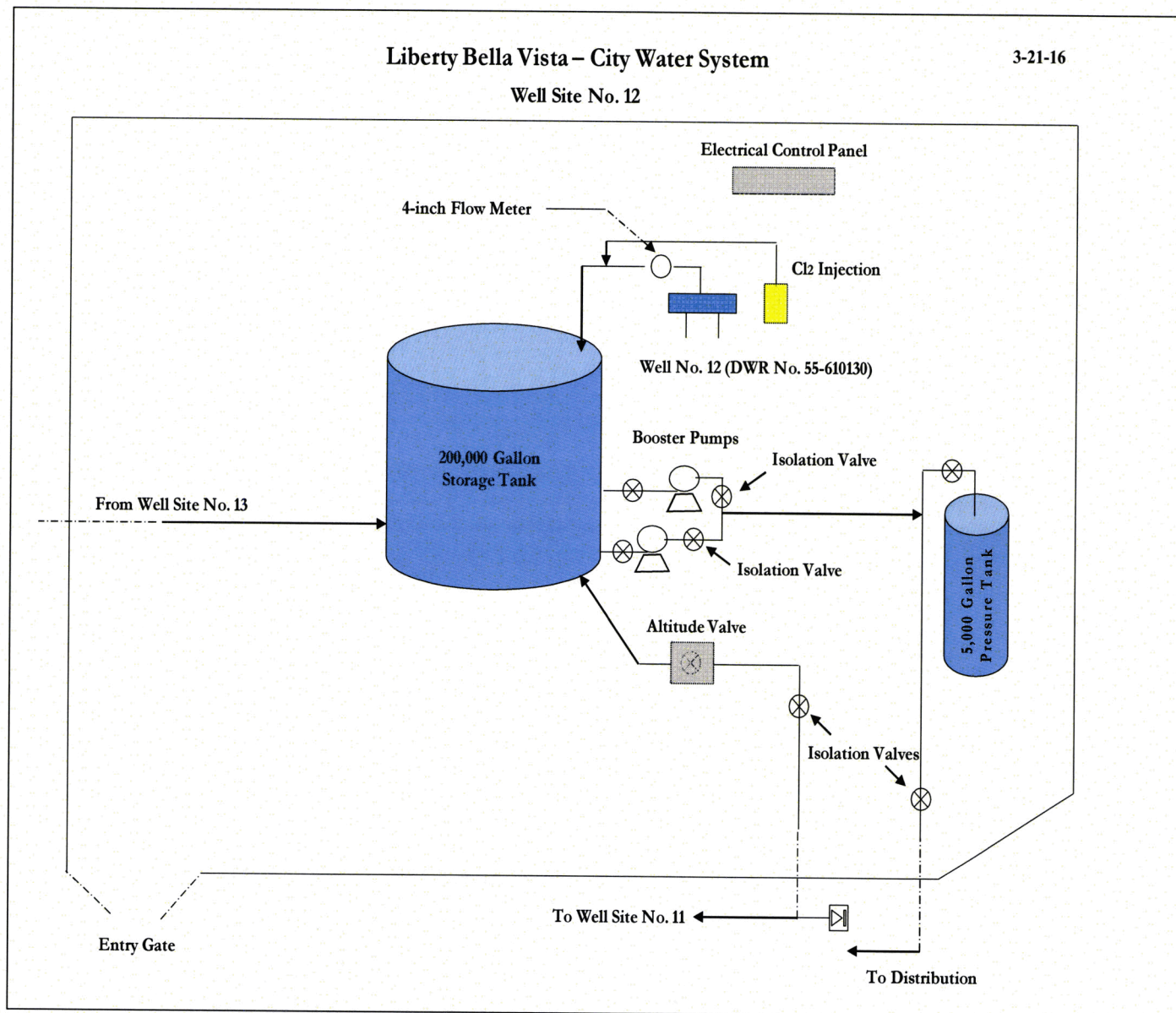


FIGURE 13 – CITY WATER SYSTEM WELL SITE NO. 12

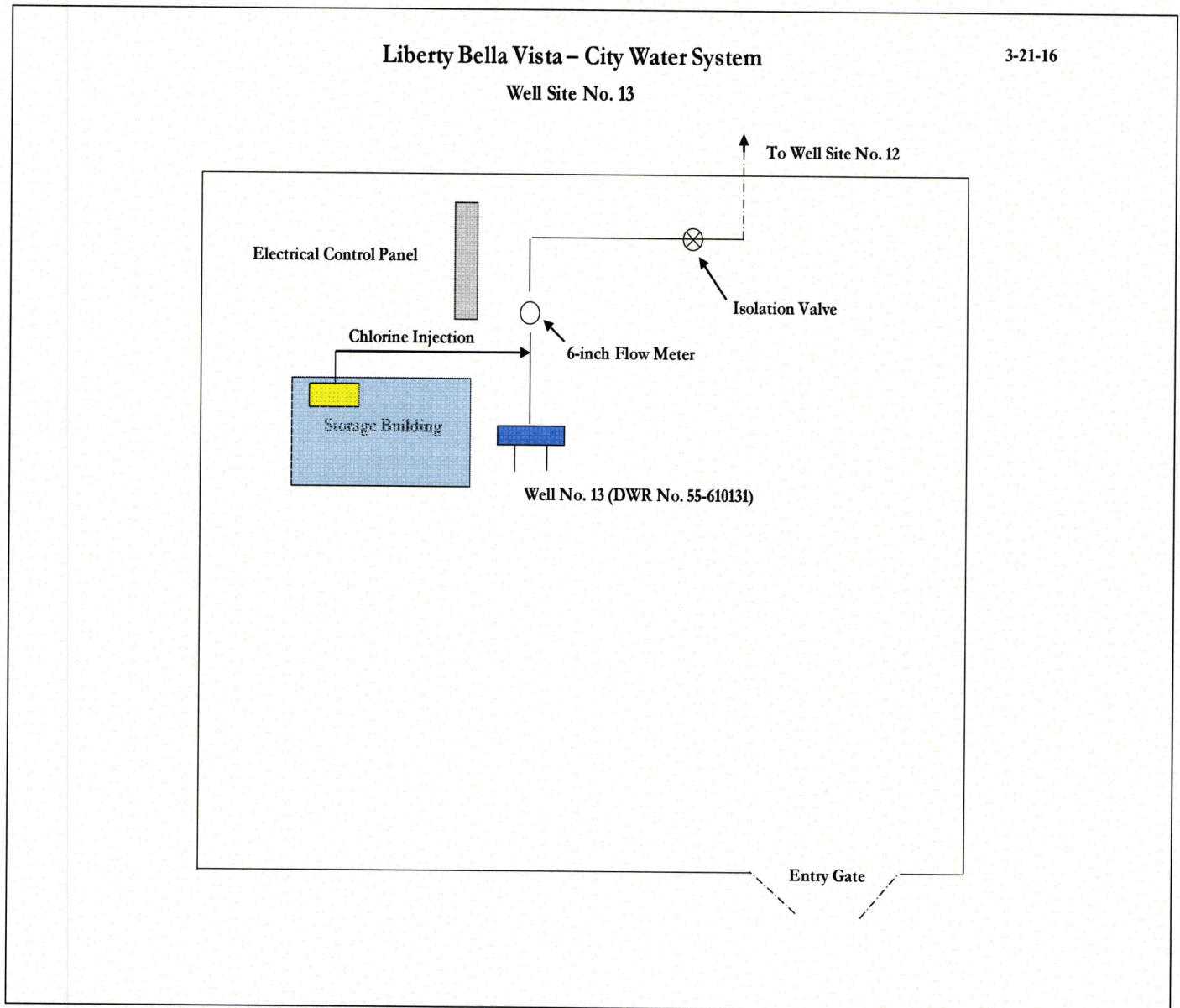


FIGURE 14 – CITY WATER SYSTEM WELL SITE NO. 13

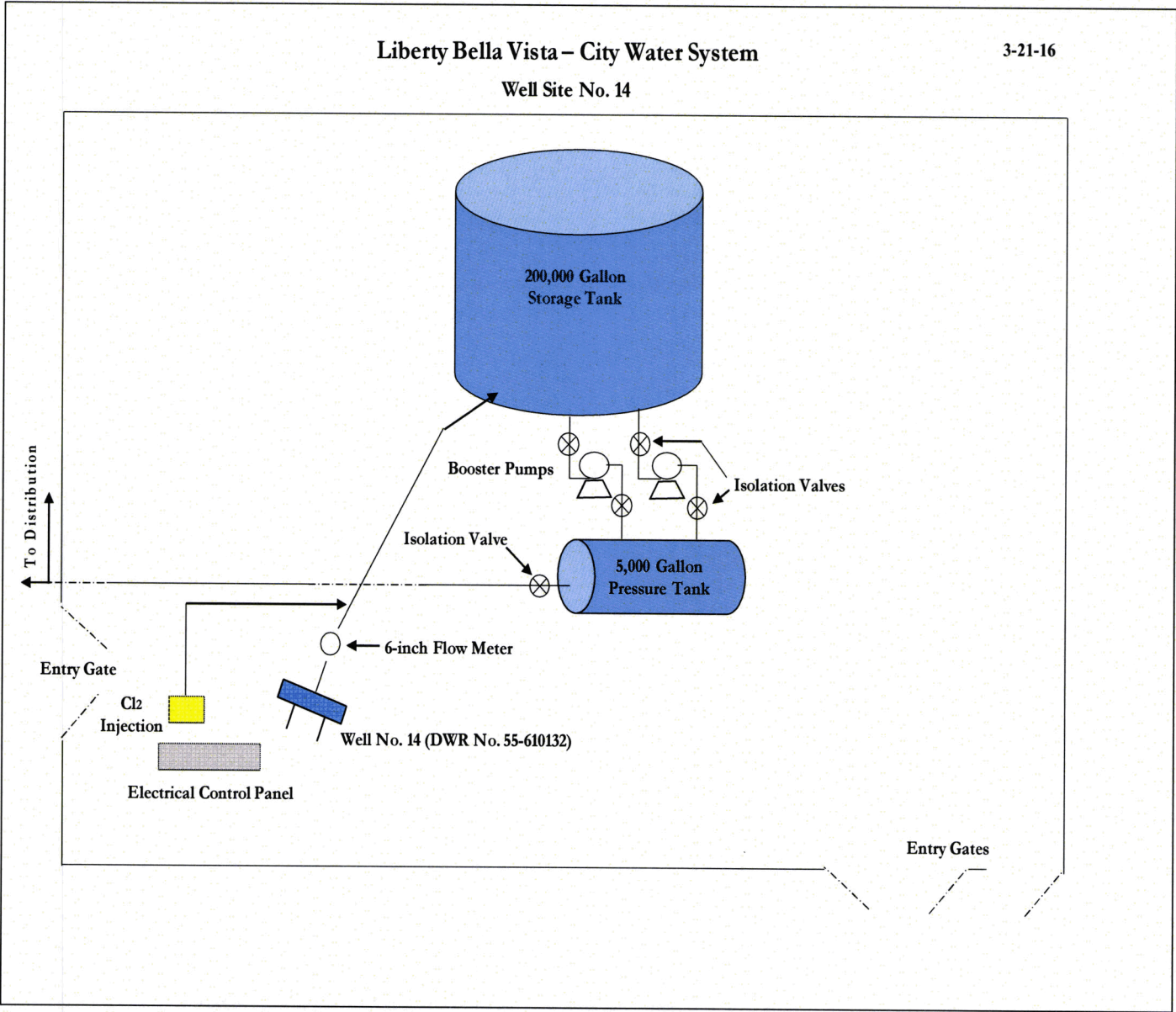


FIGURE 15 – CITY WATER SYSTEM WELL SITE NO. 14

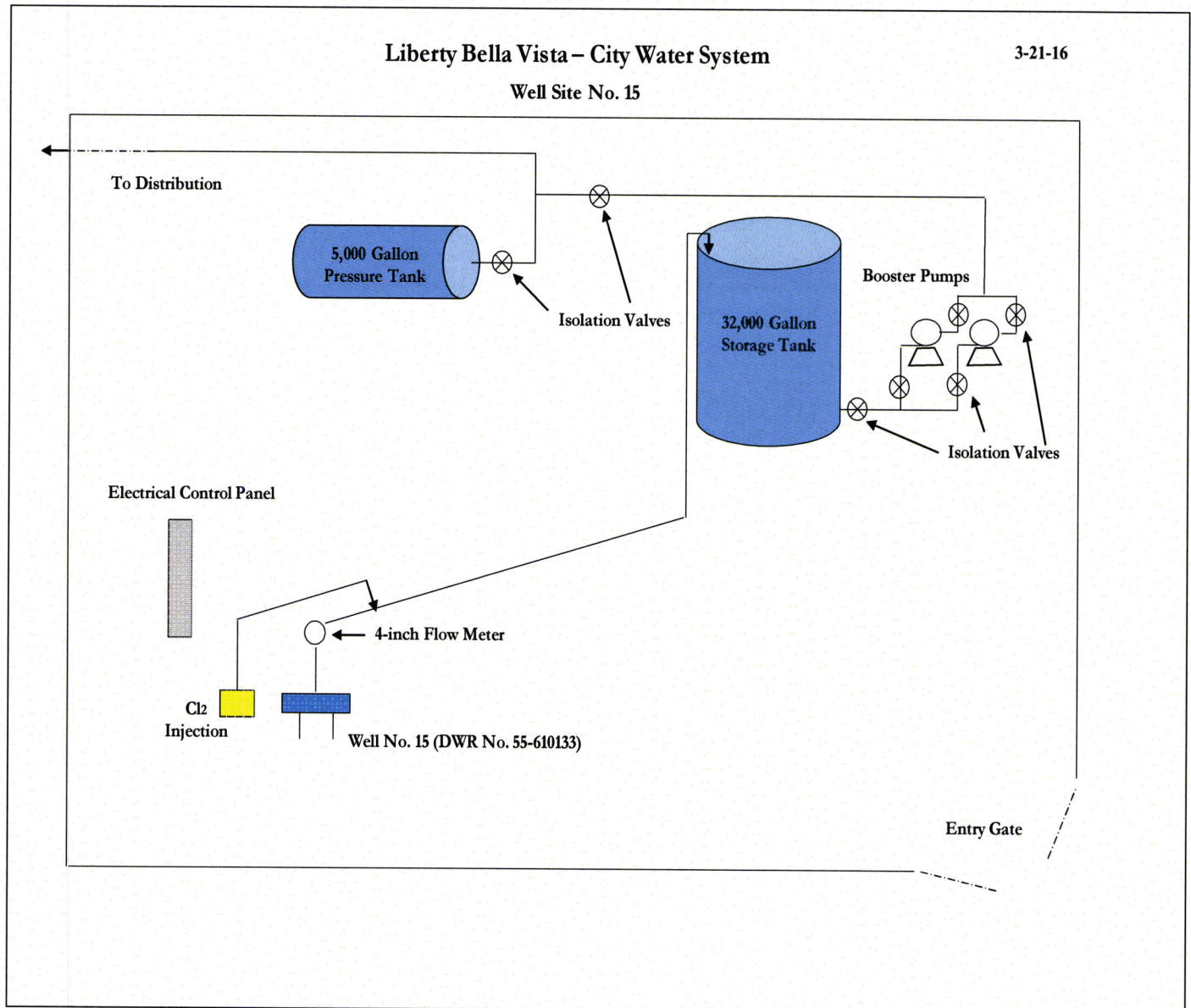


FIGURE 16 – CITY WATER SYSTEM WELL SITE NO. 15

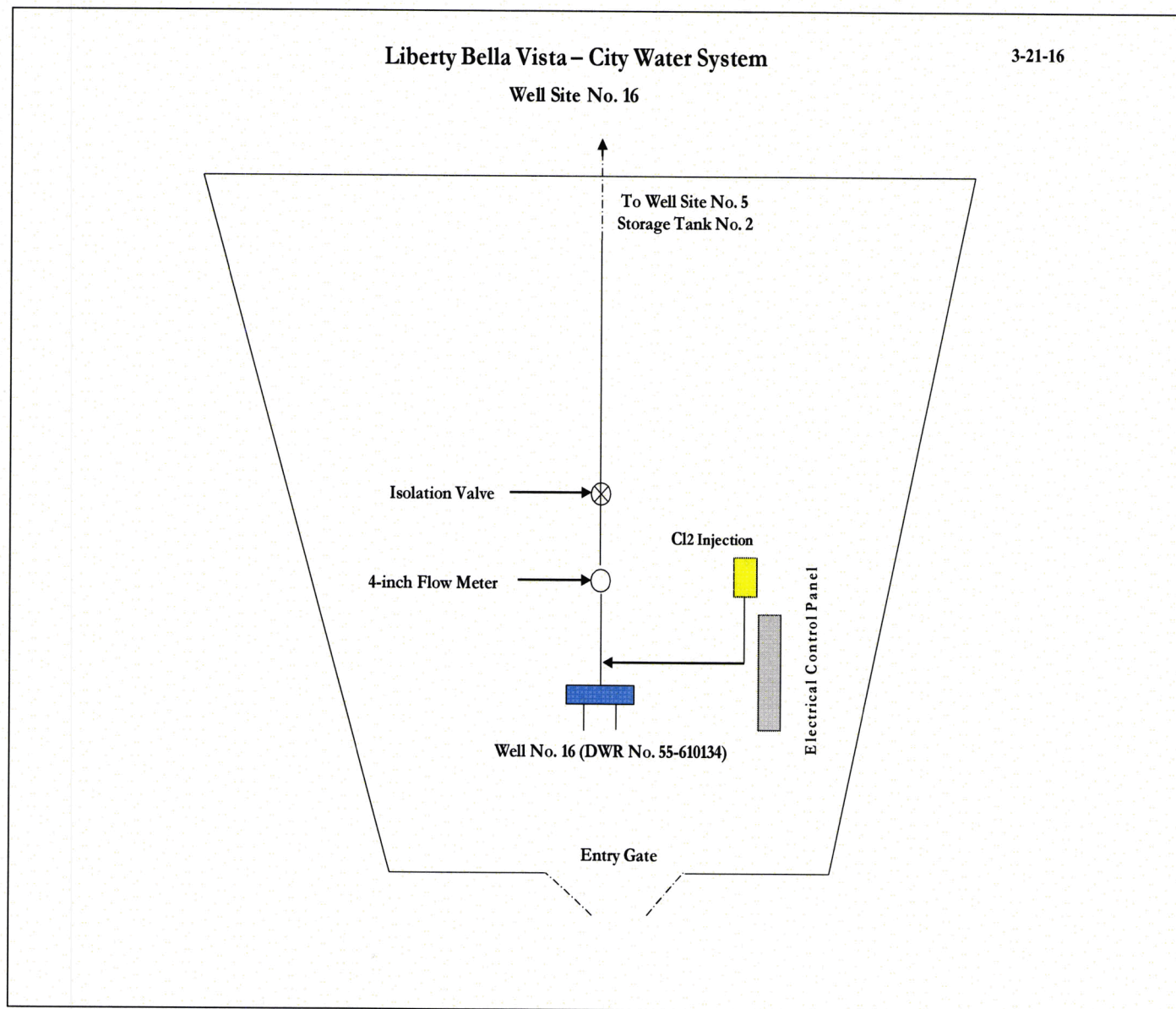


FIGURE 17 – CITY WATER SYSTEM WELL SITE NO. 16

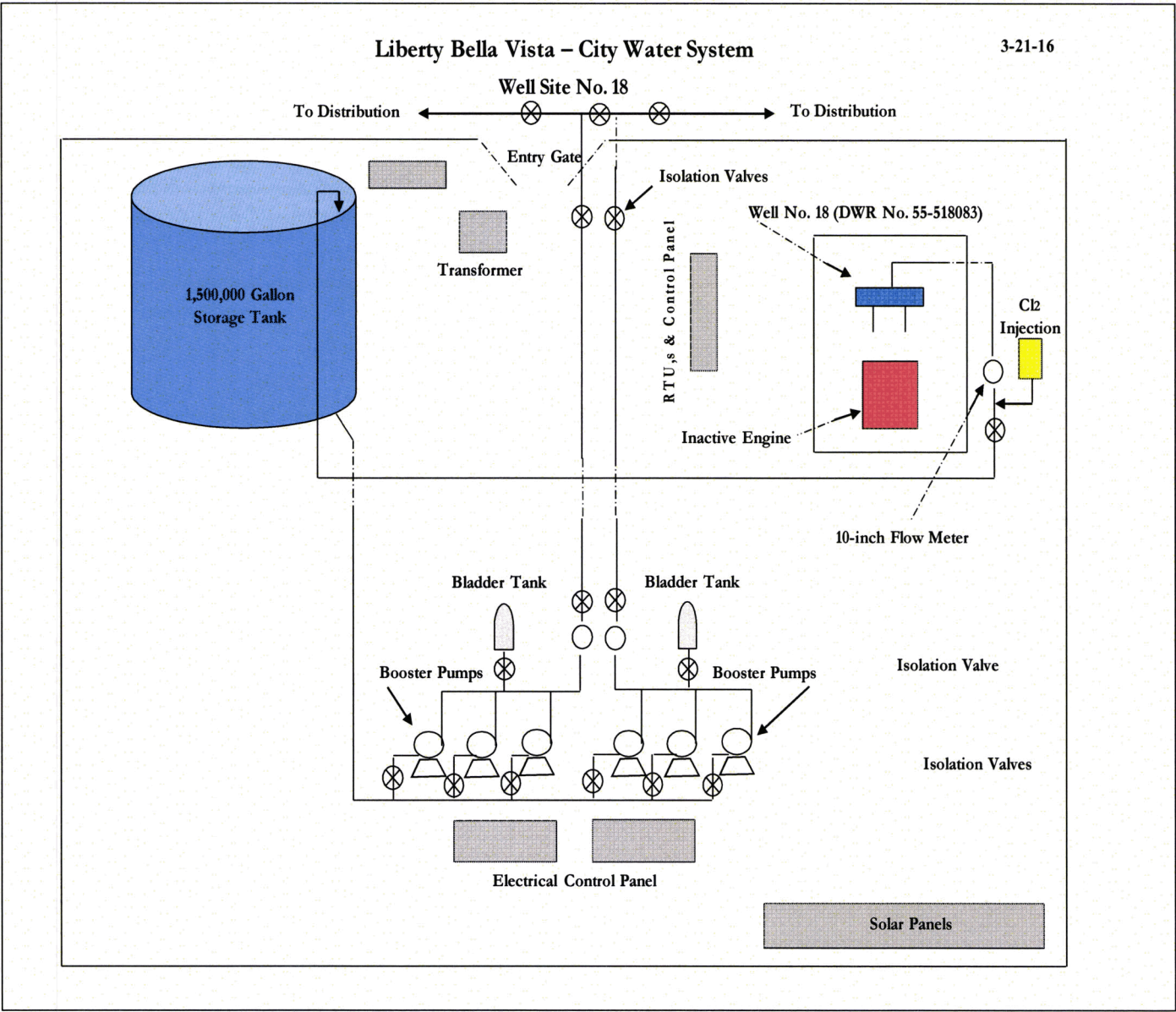


FIGURE 18 – CITY WATER SYSTEM WELL SITE NO. 18

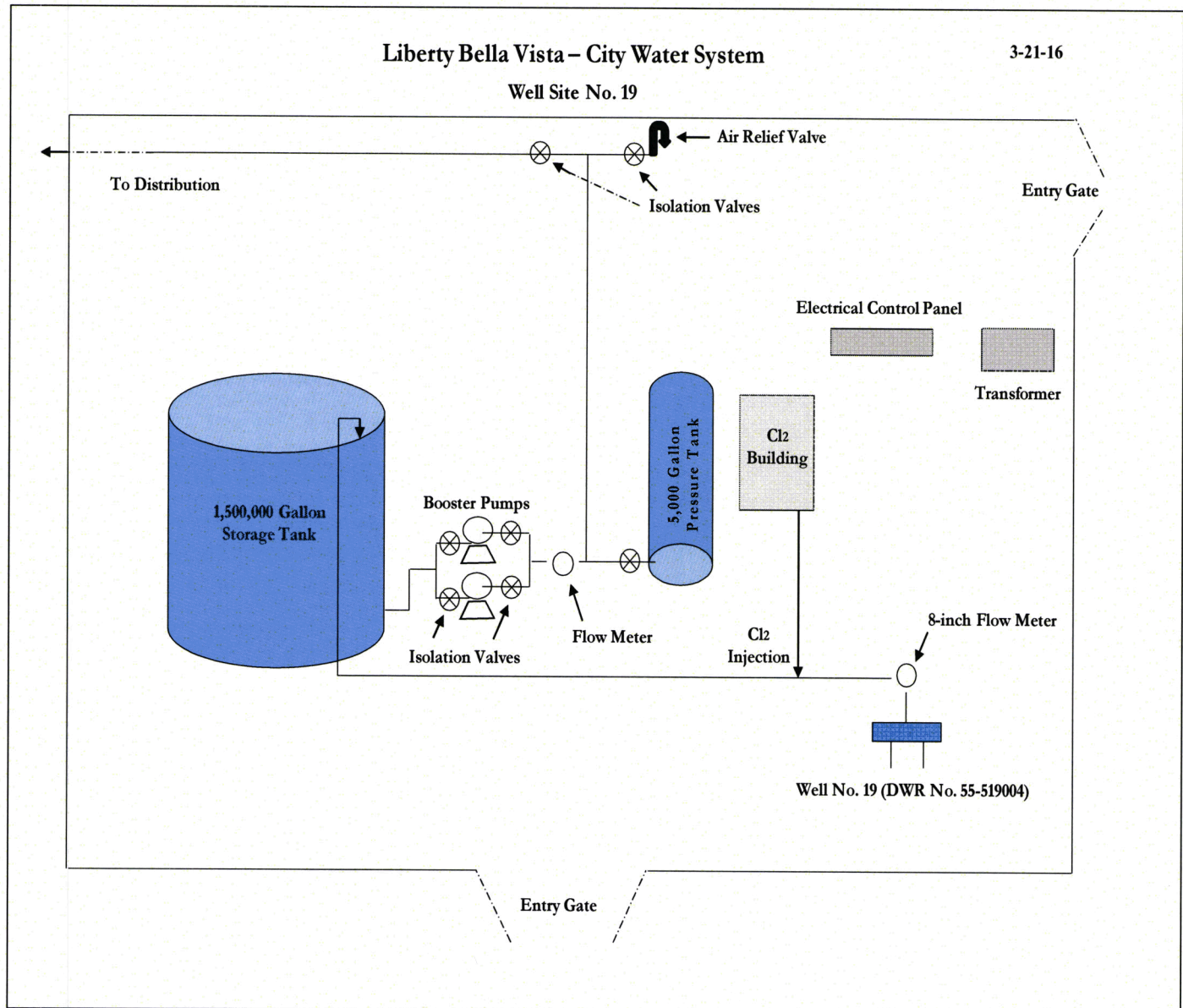


FIGURE 19 – CITY WATER SYSTEM WELL SITE NO. 19

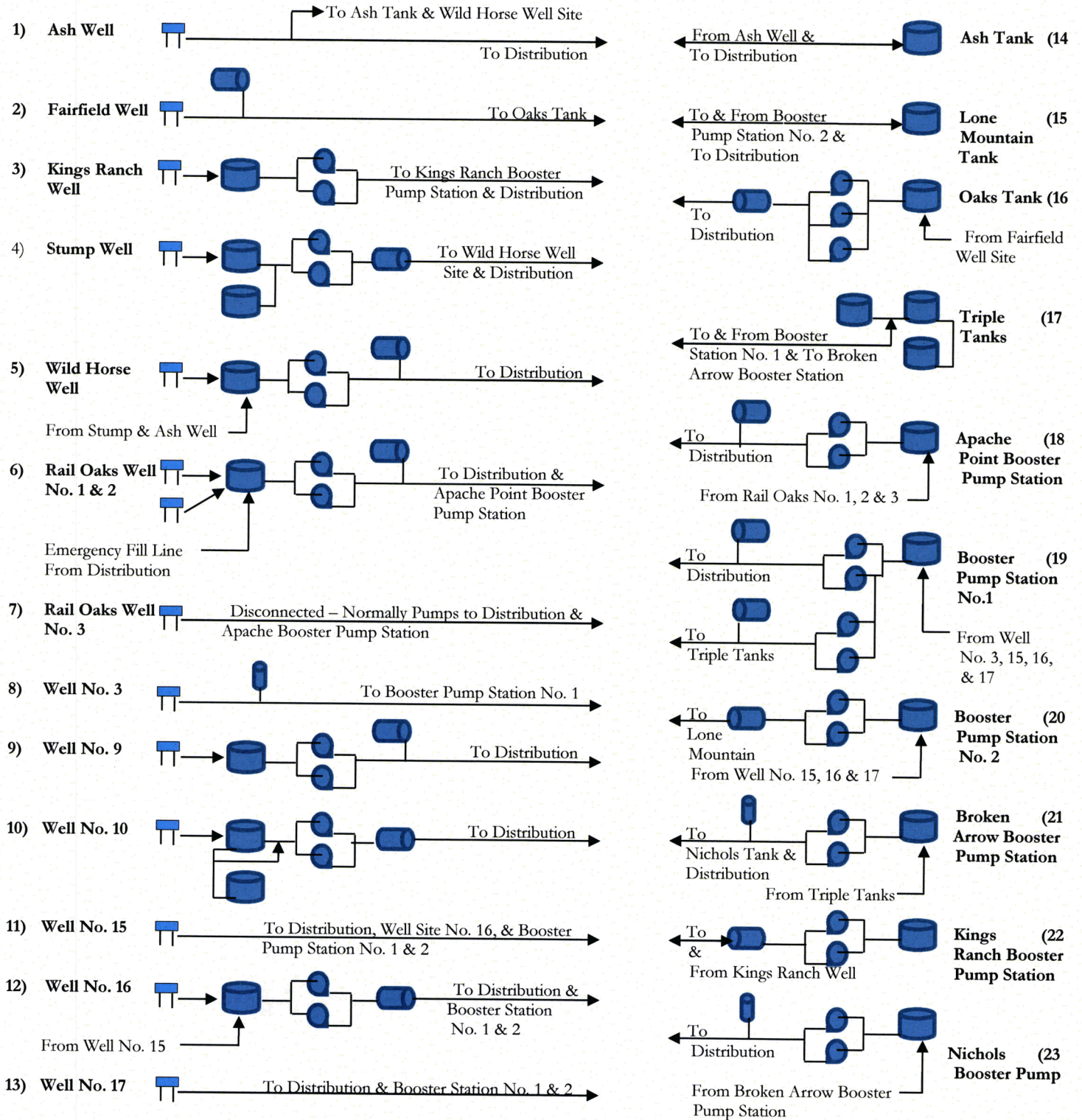


FIGURE 20 – SOUTH WATER SYSTEM PLANT

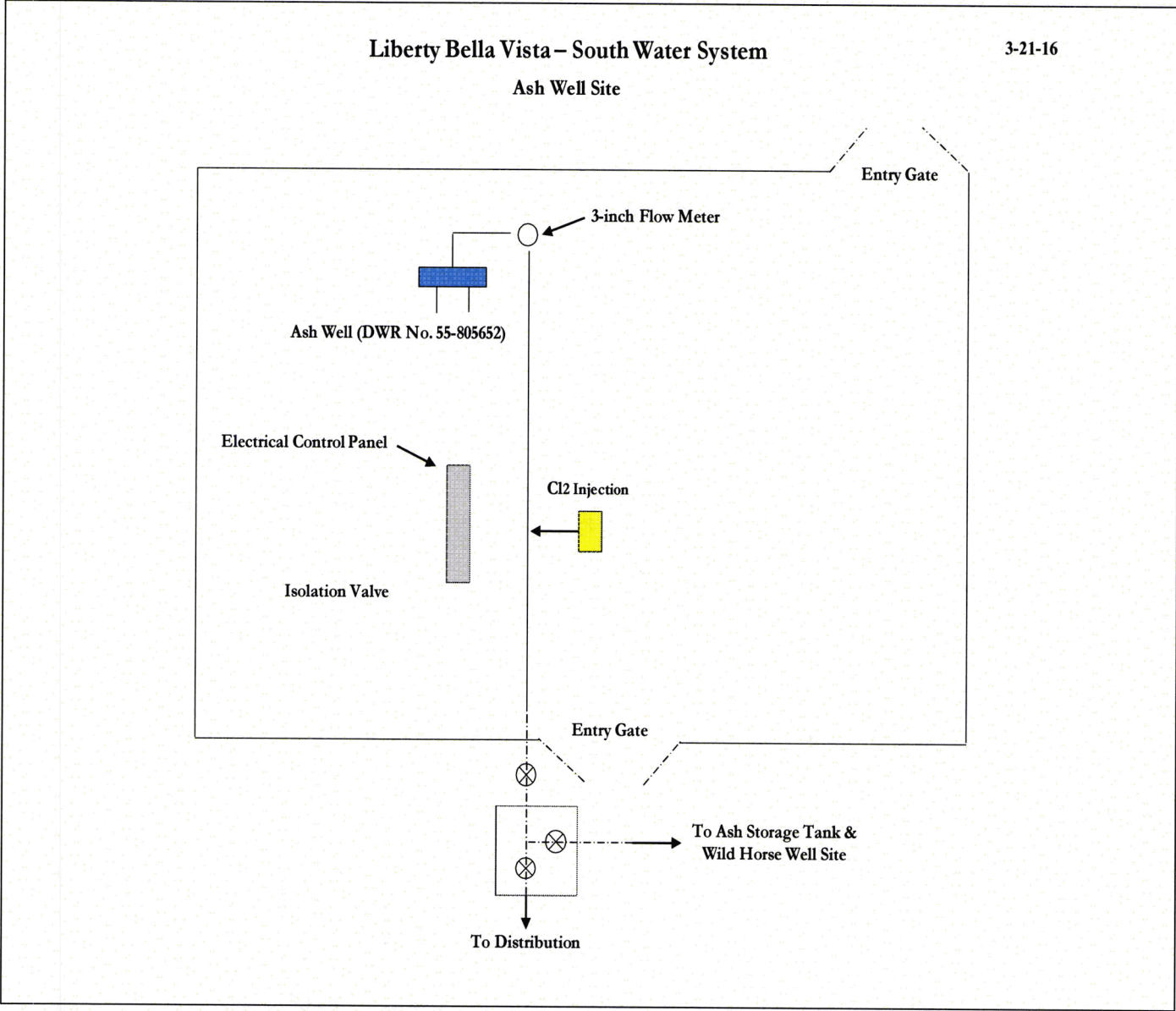


FIGURE 21 – SOUTH WATER SYSTEM ASH WELL SITE

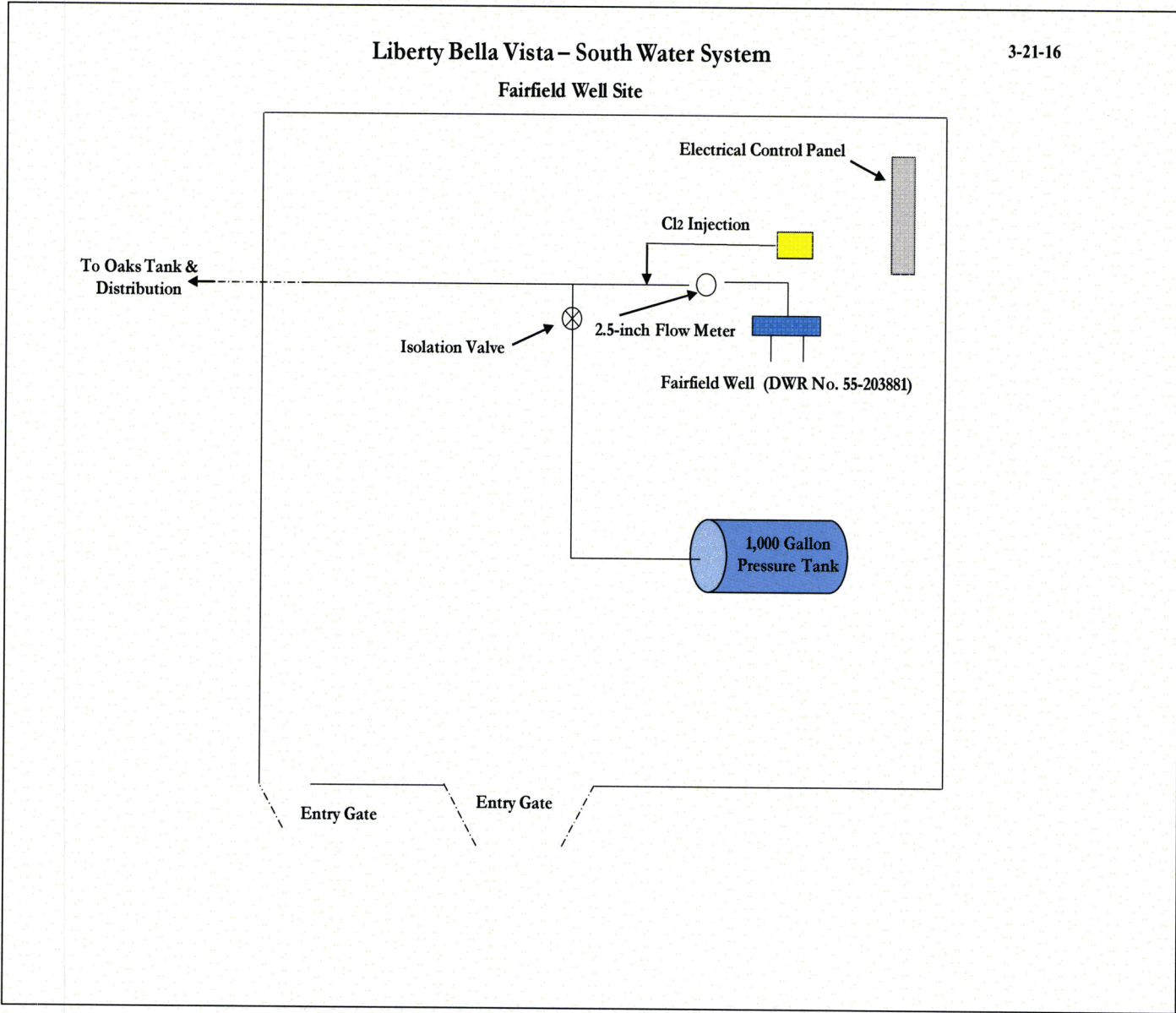


FIGURE 22 – SOUTH WATER SYSTEM FAIRFIELD WELL SITE

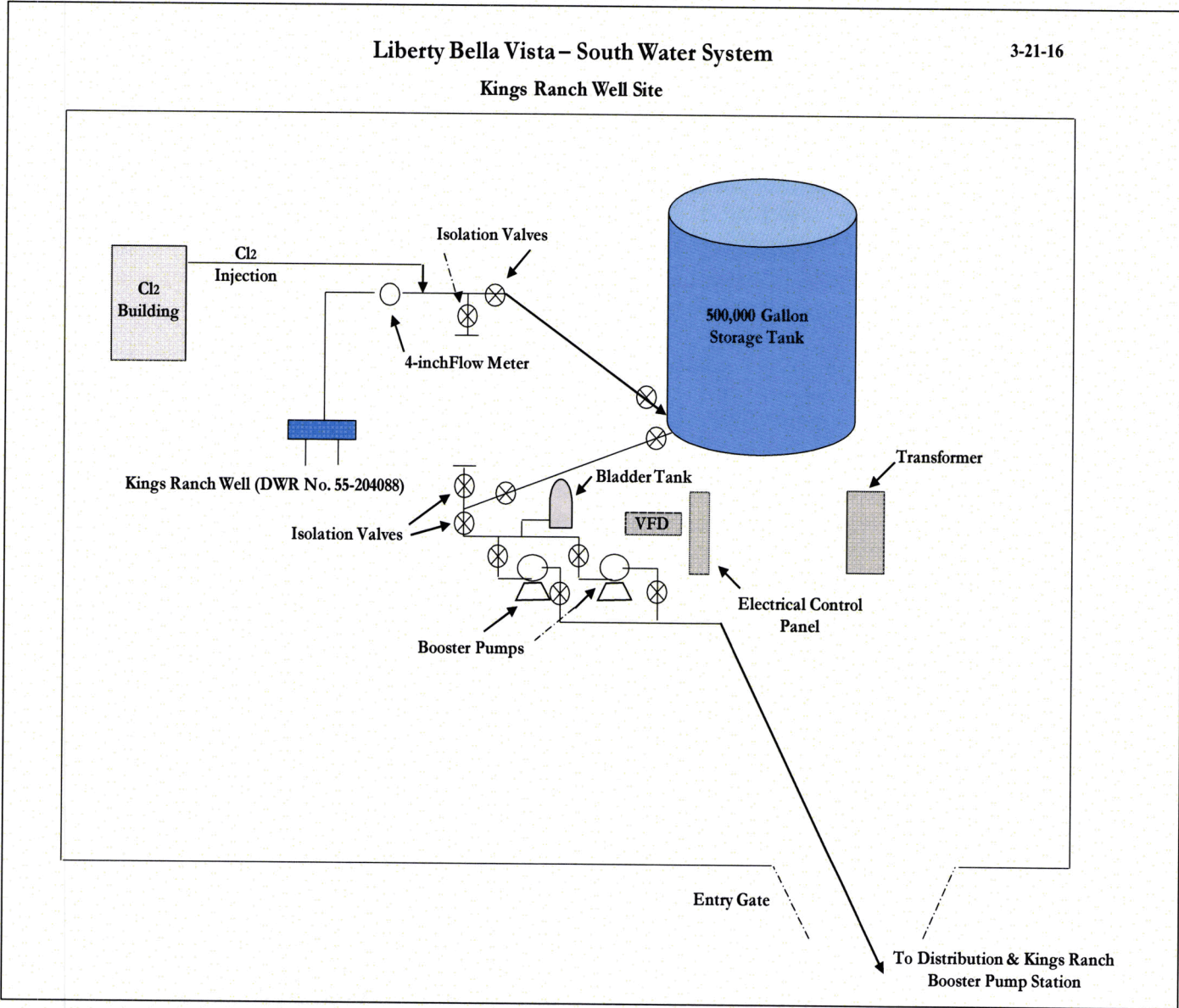


FIGURE 23 – SOUTH WATER SYSTEM KINGS RANCH WELL SITE

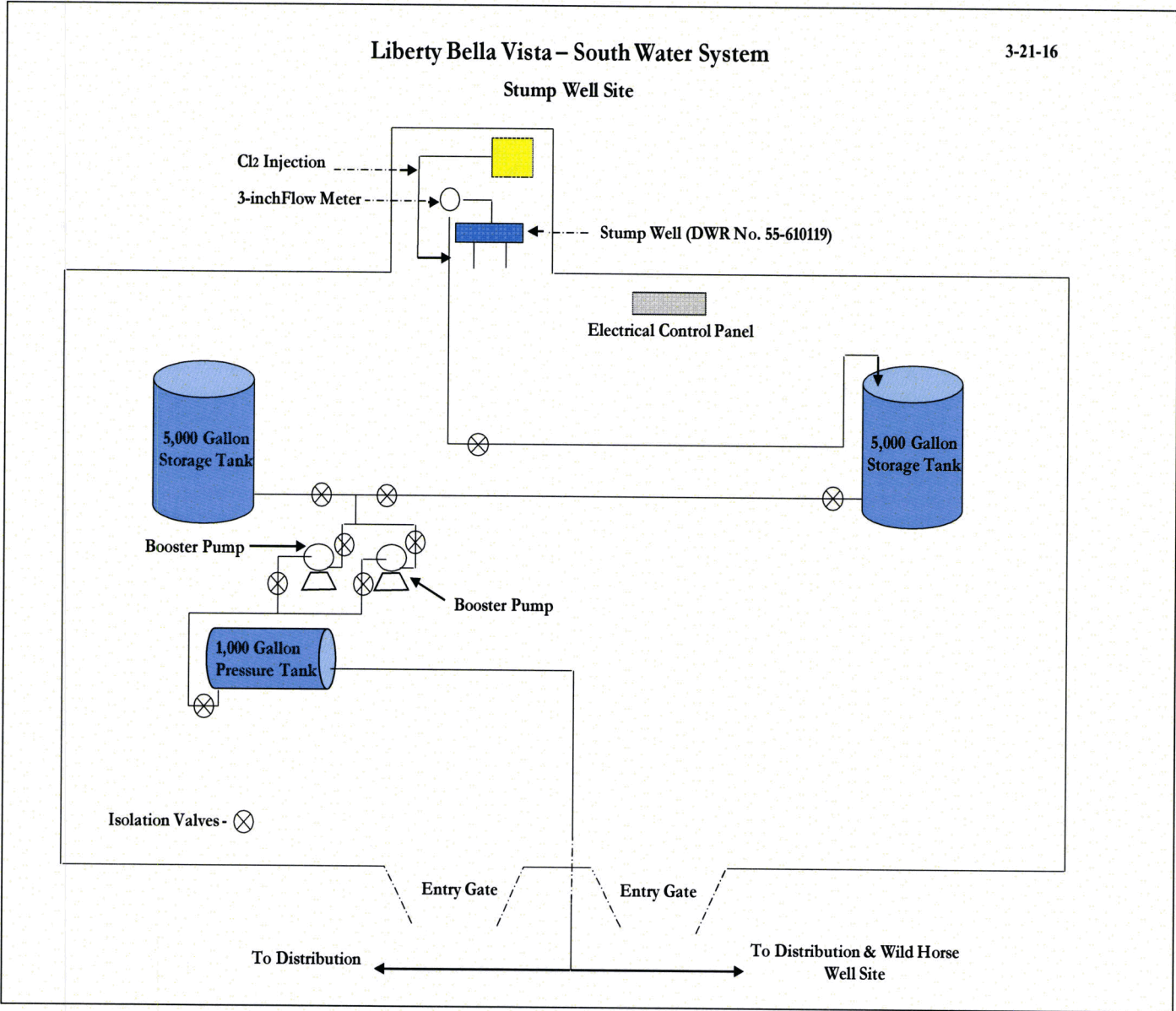


FIGURE 24 – SOUTH WATER SYSTEM STUMP WELL SITE

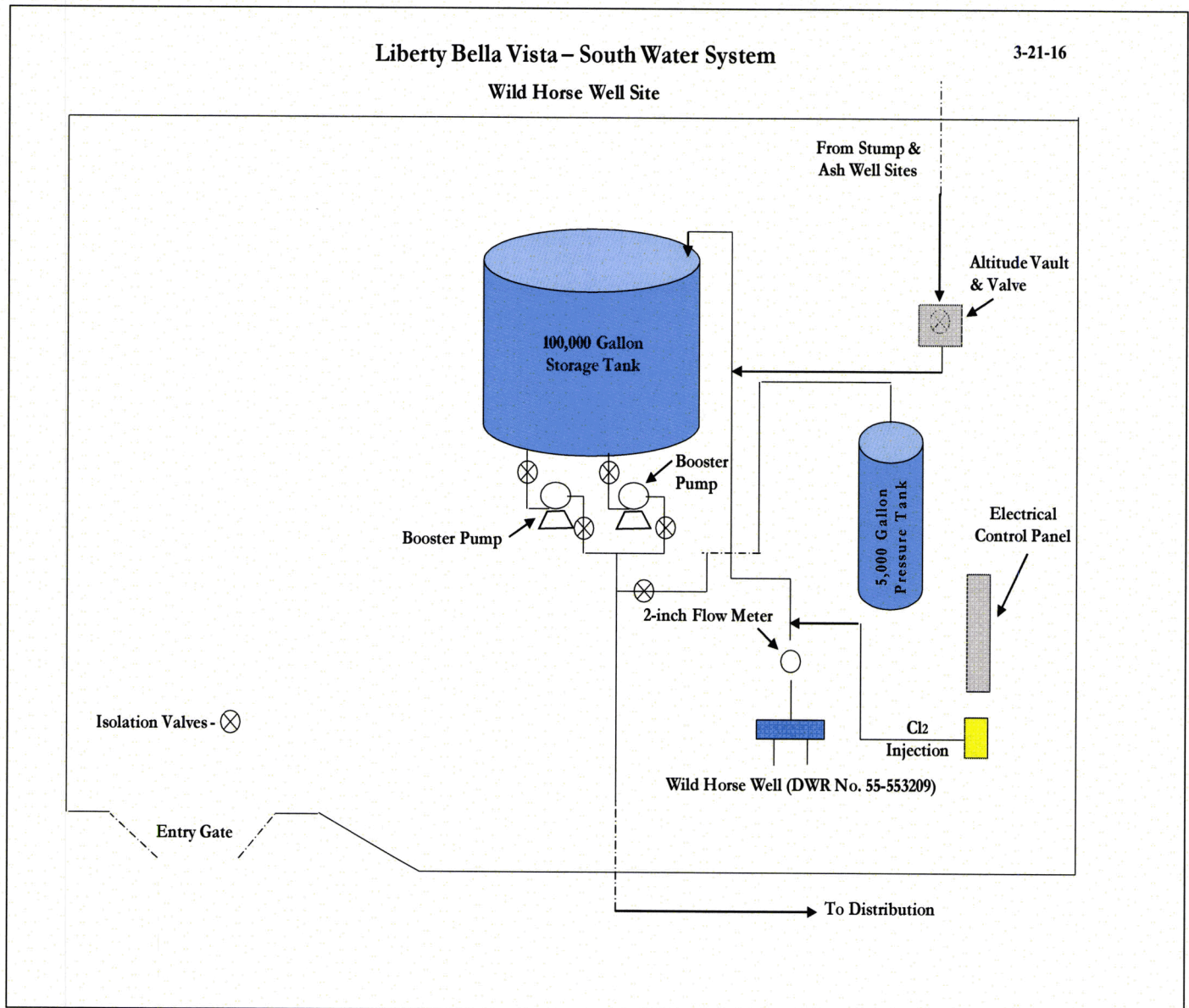


FIGURE 25 – SOUTH WATER SYSTEM WILD HORSE WELL SITE

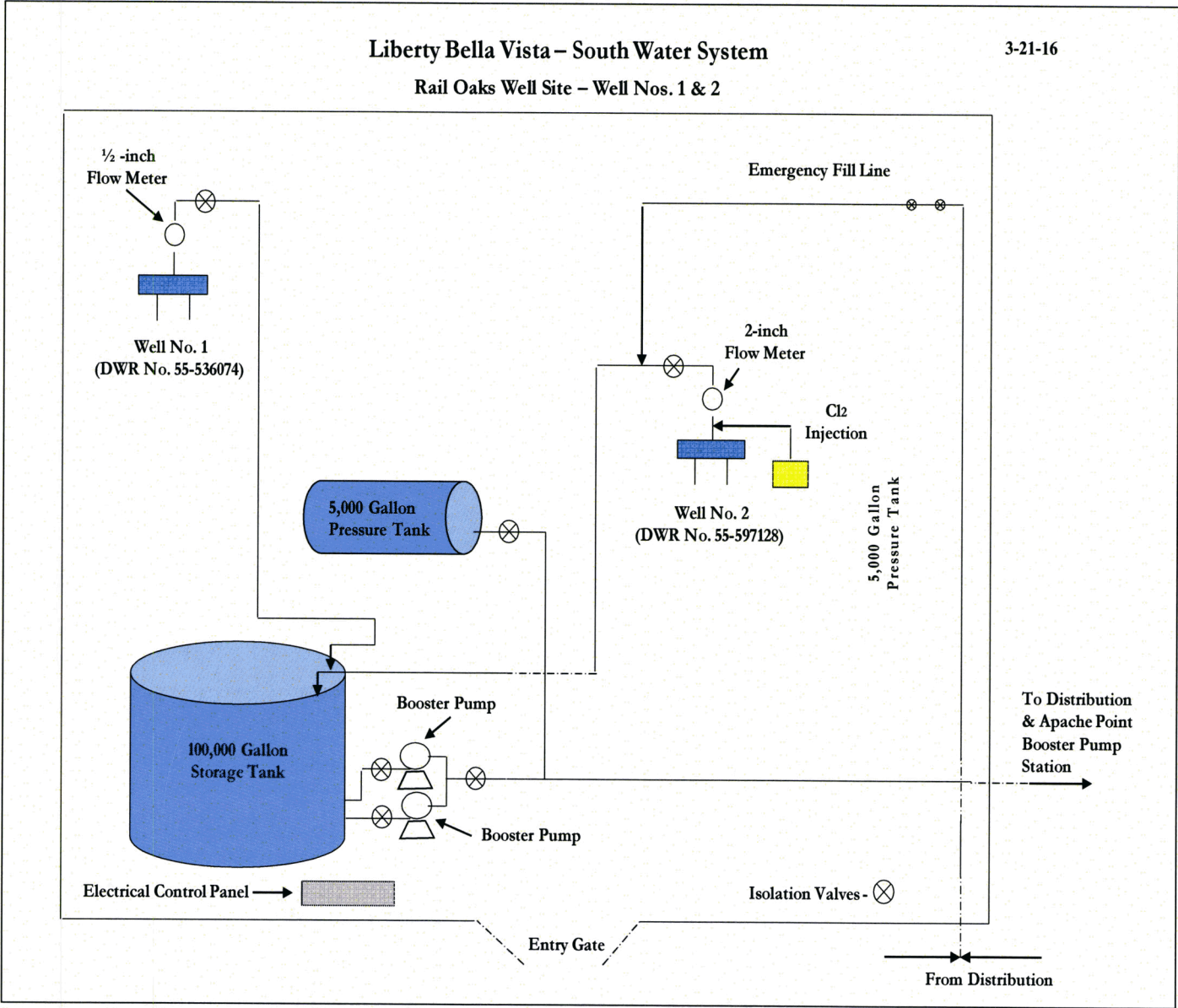


FIGURE 26 – SOUTH WATER SYSTEM RAIL OAKS WELL SITE – WELL NOS. 1 & 2

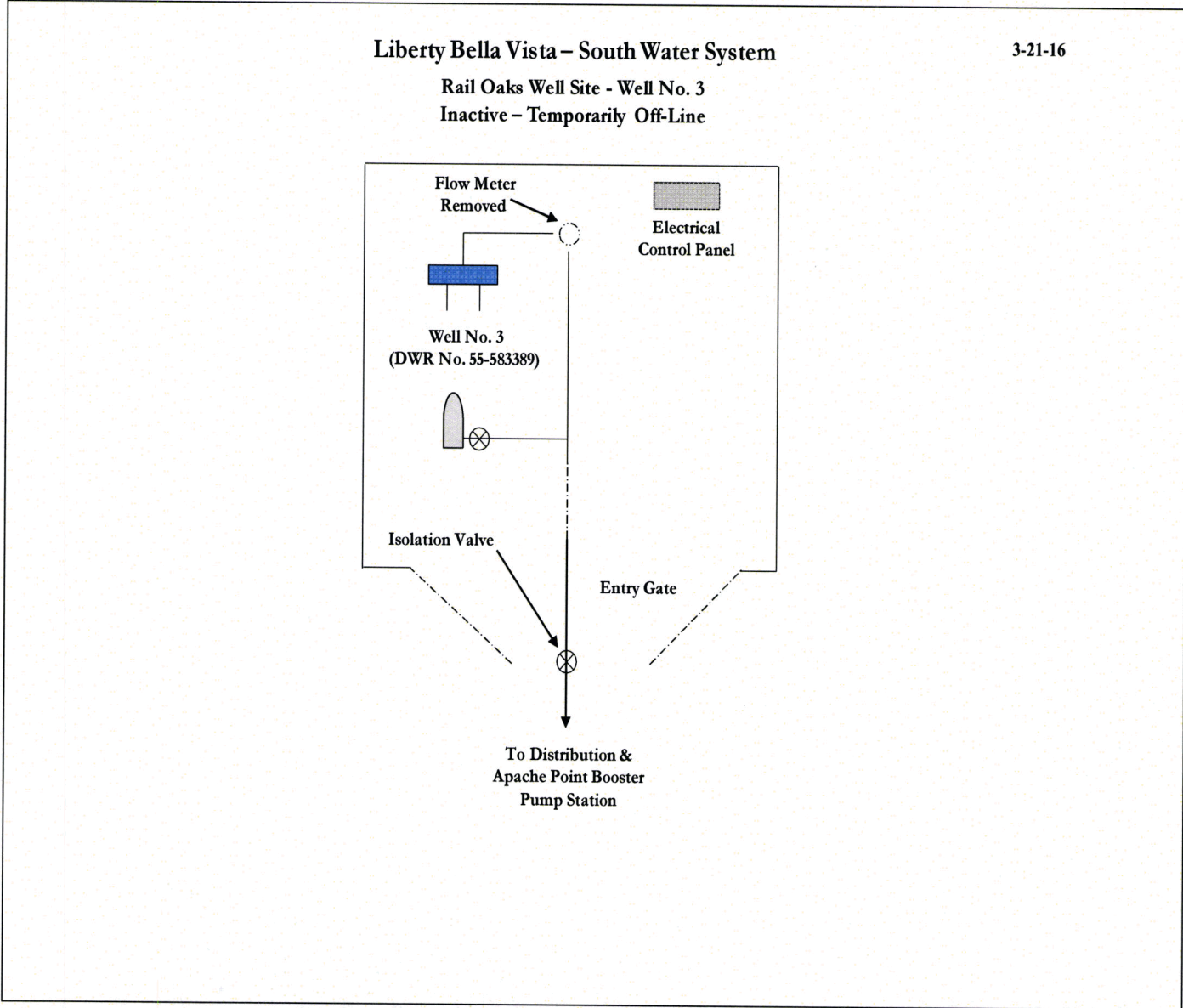


FIGURE 27 – SOUTH WATER SYSTEM RAIL OAKS WELL SITE – WELL NO. 3

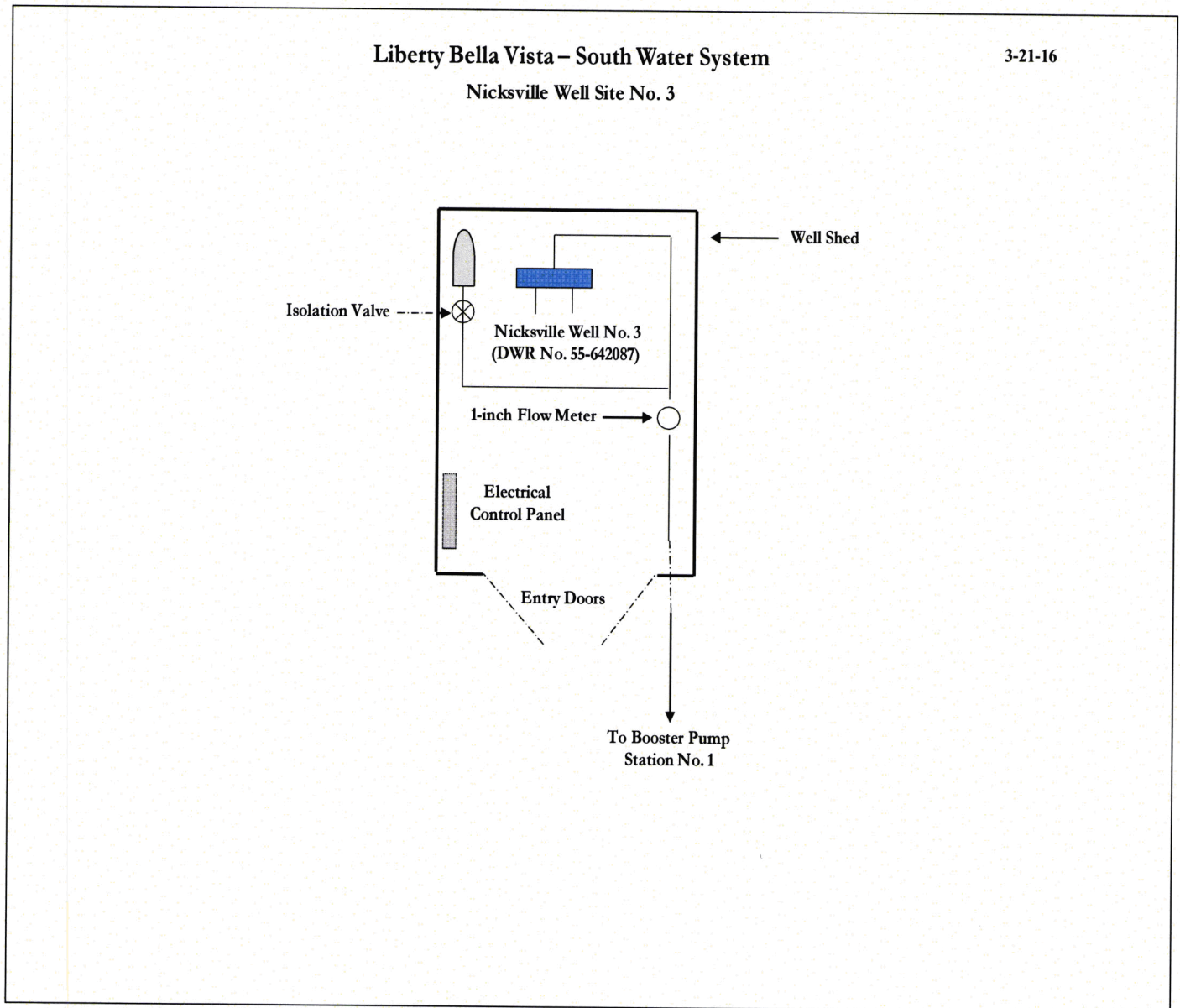


FIGURE 28 – SOUTH WATER SYSTEM NICKSVILLE WELL SITE NO. 3

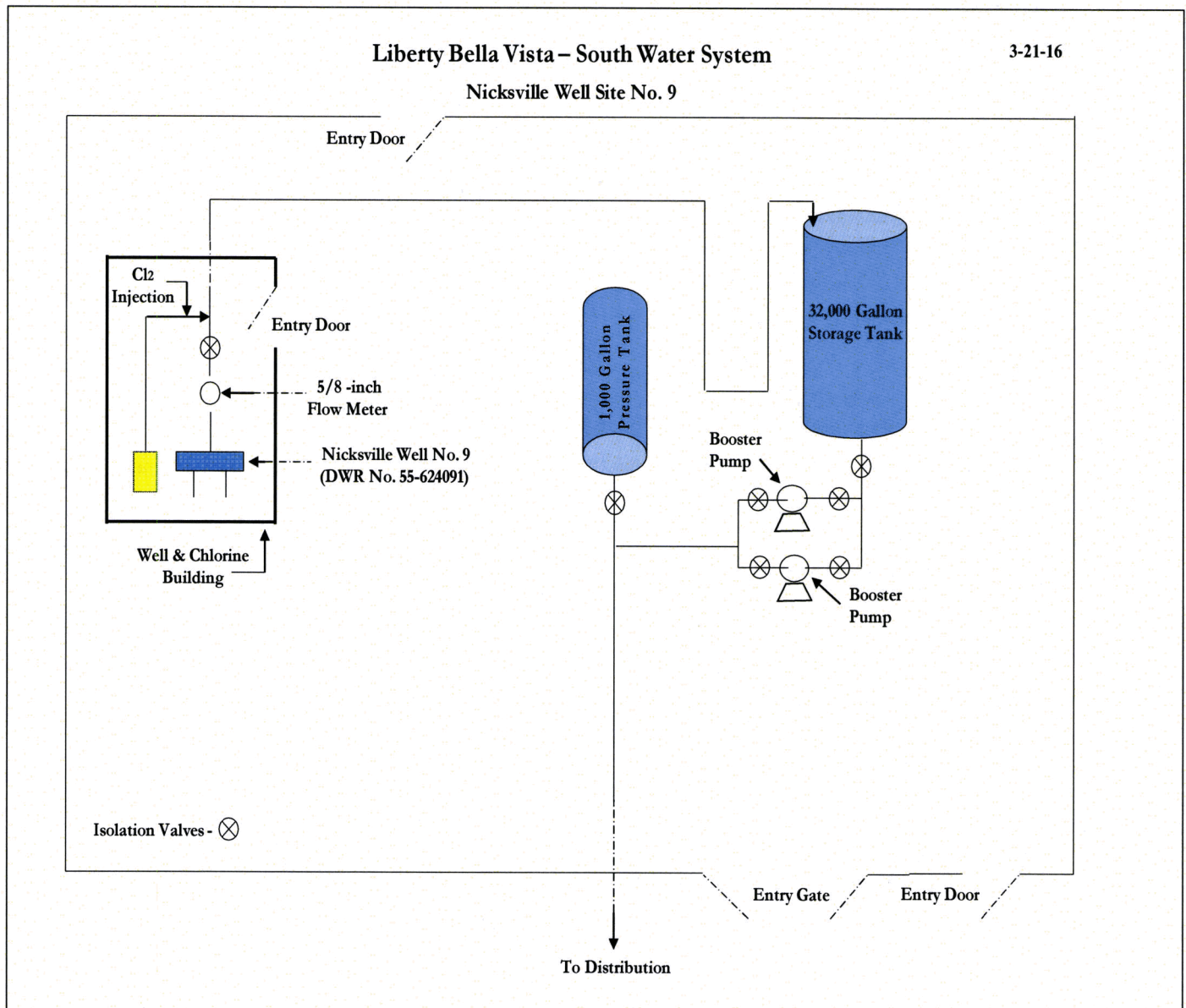


FIGURE 29 – SOUTH WATER SYSTEM NICKSVILLE WELL SITE NO. 9

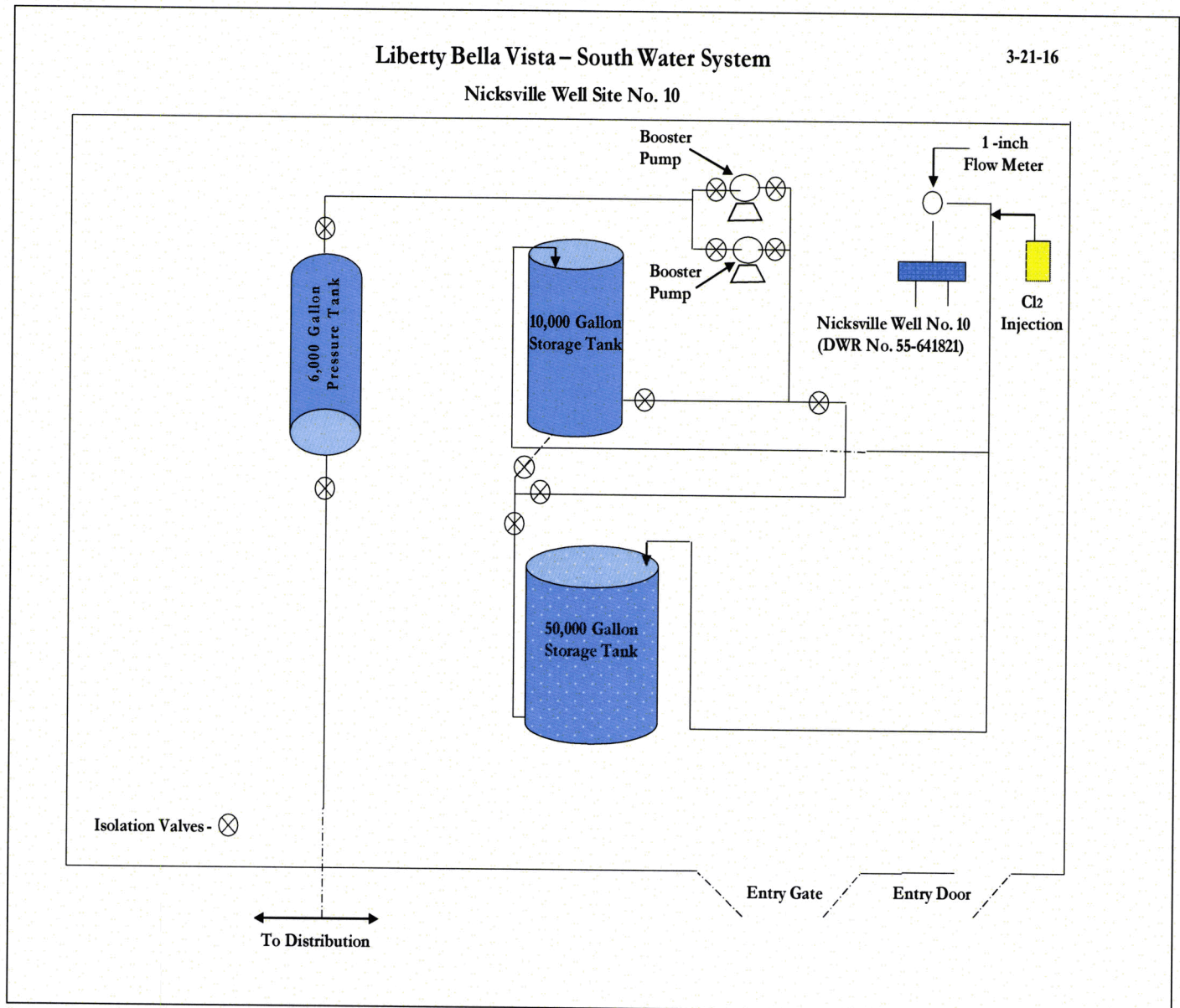


FIGURE 30 – SOUTH WATER SYSTEM NICKSVILLE WELL SITE NO. 10

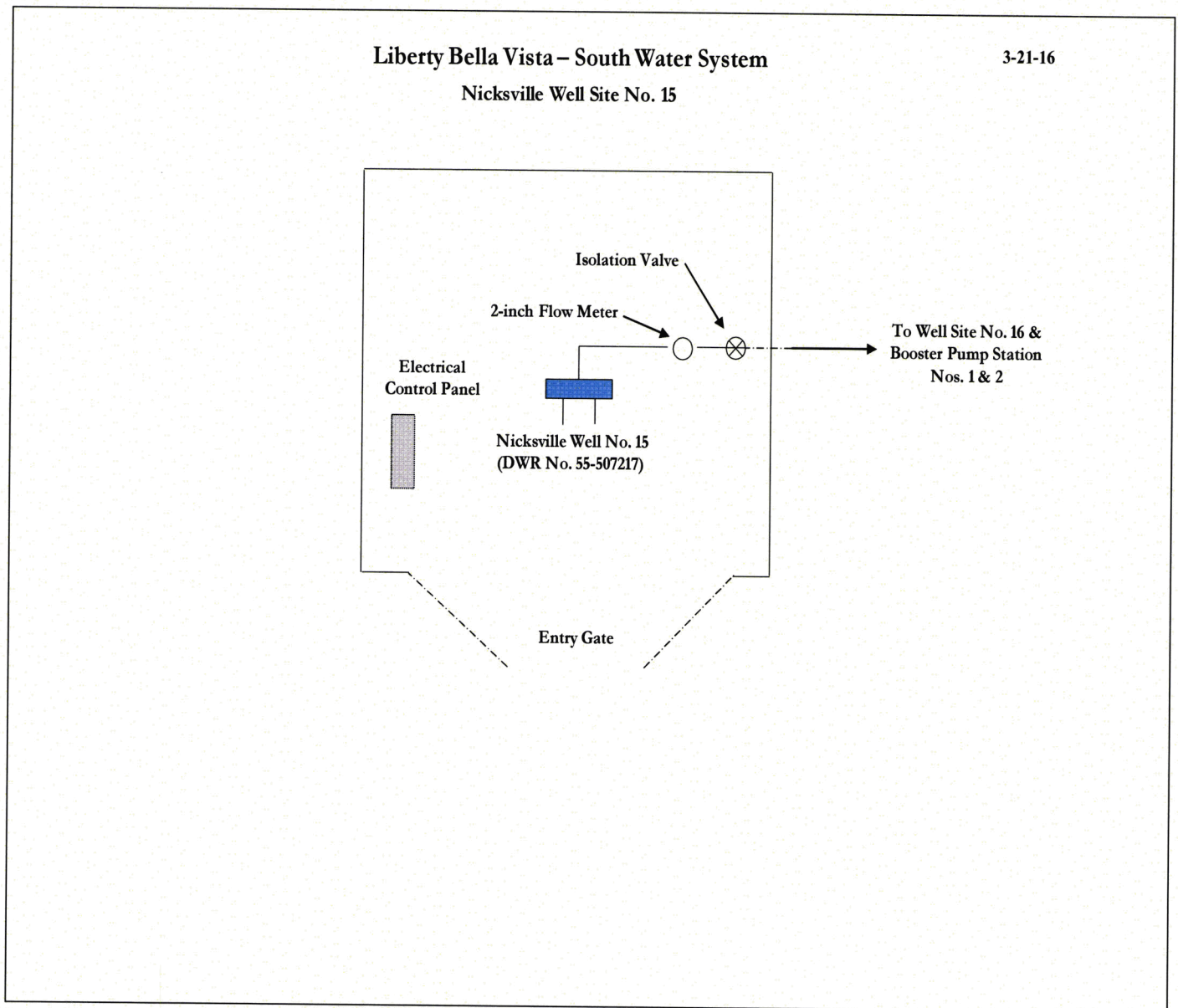


FIGURE 31 – SOUTH WATER SYSTEM NICKSVILLE WELL SITE NO. 15

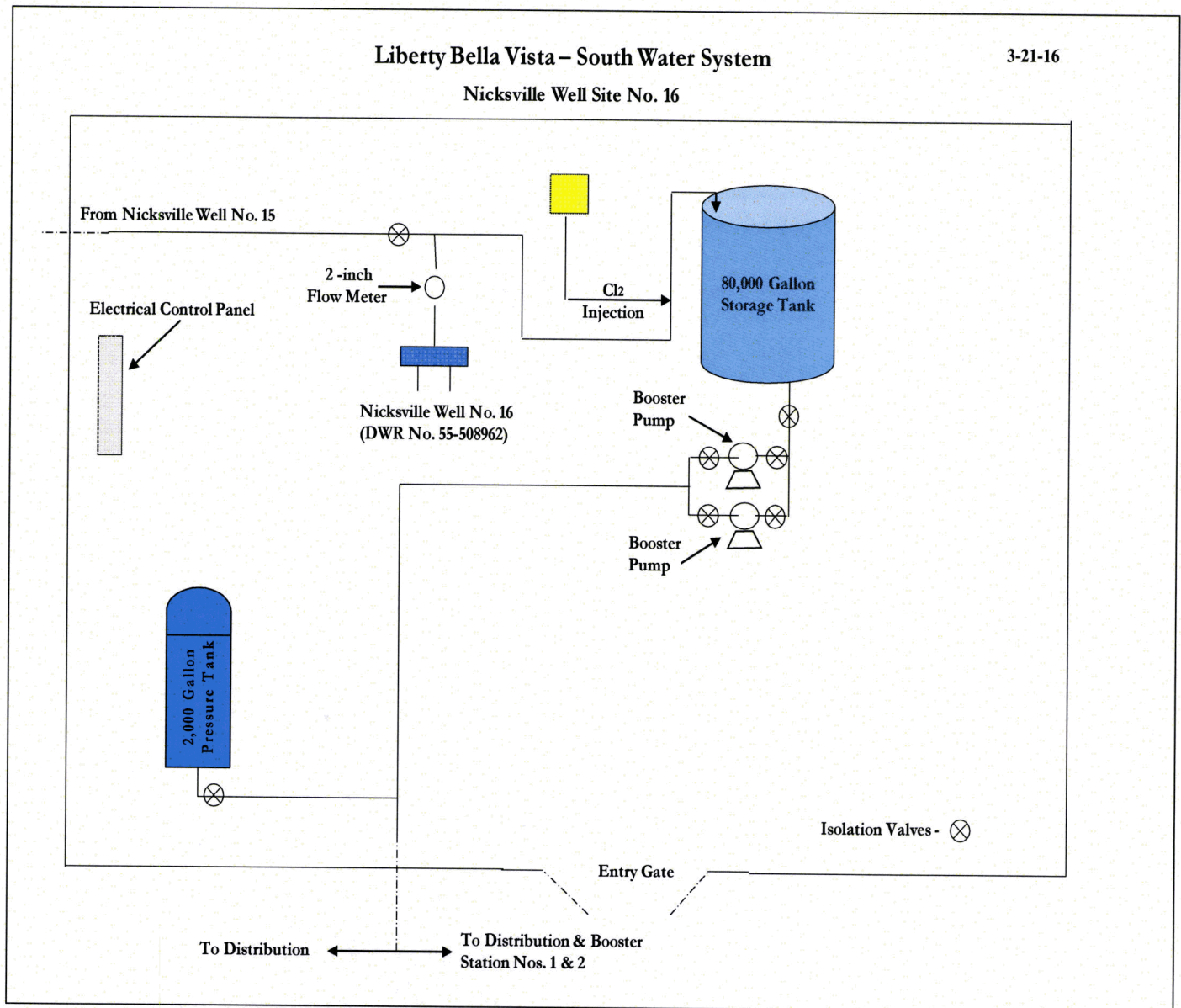


FIGURE 32 – SOUTH WATER SYSTEM NICKSVILLE WELL SITE NO. 16

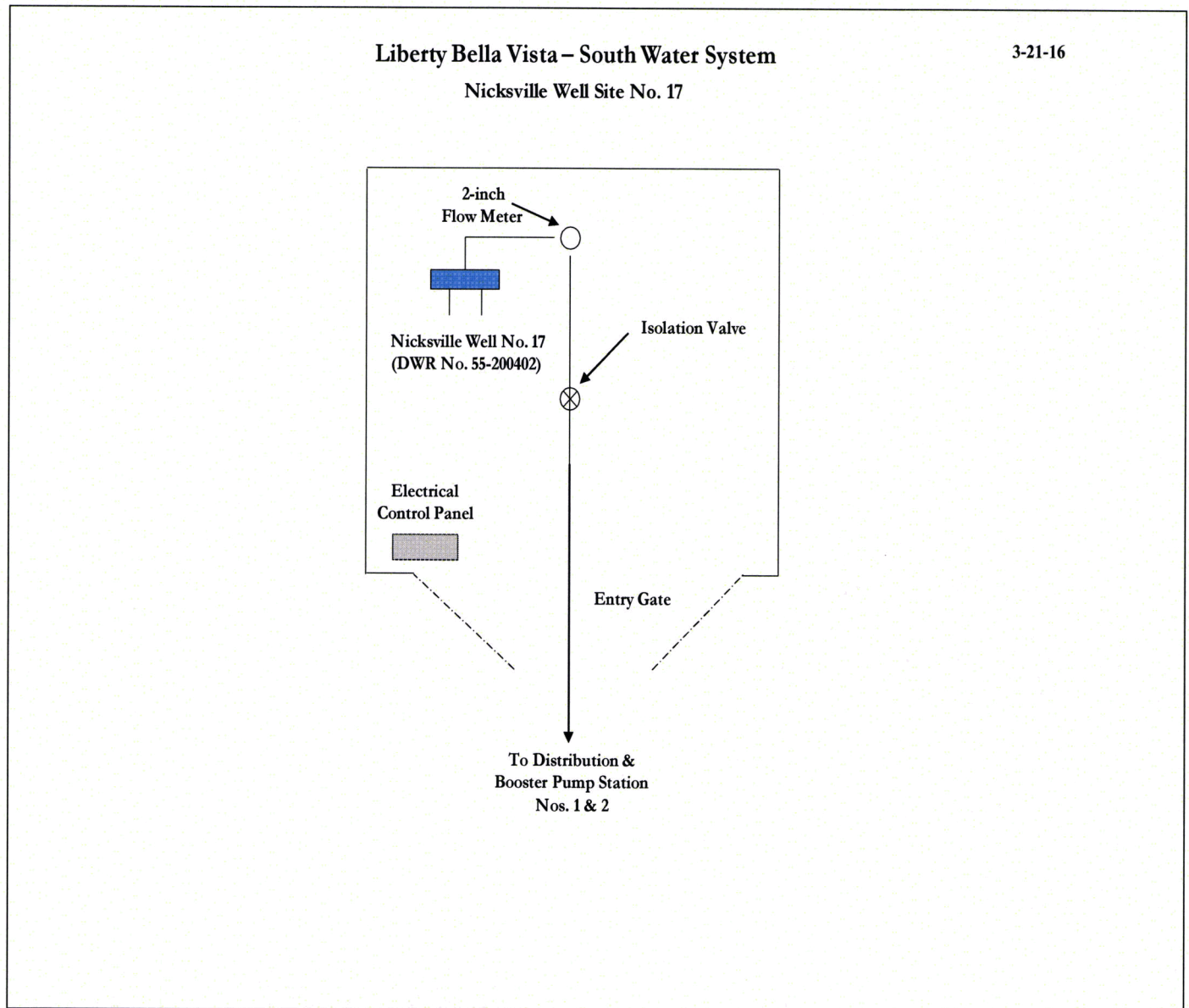


FIGURE 33 – SOUTH WATER SYSTEM NICKSVILLE WELL SITE NO. 17

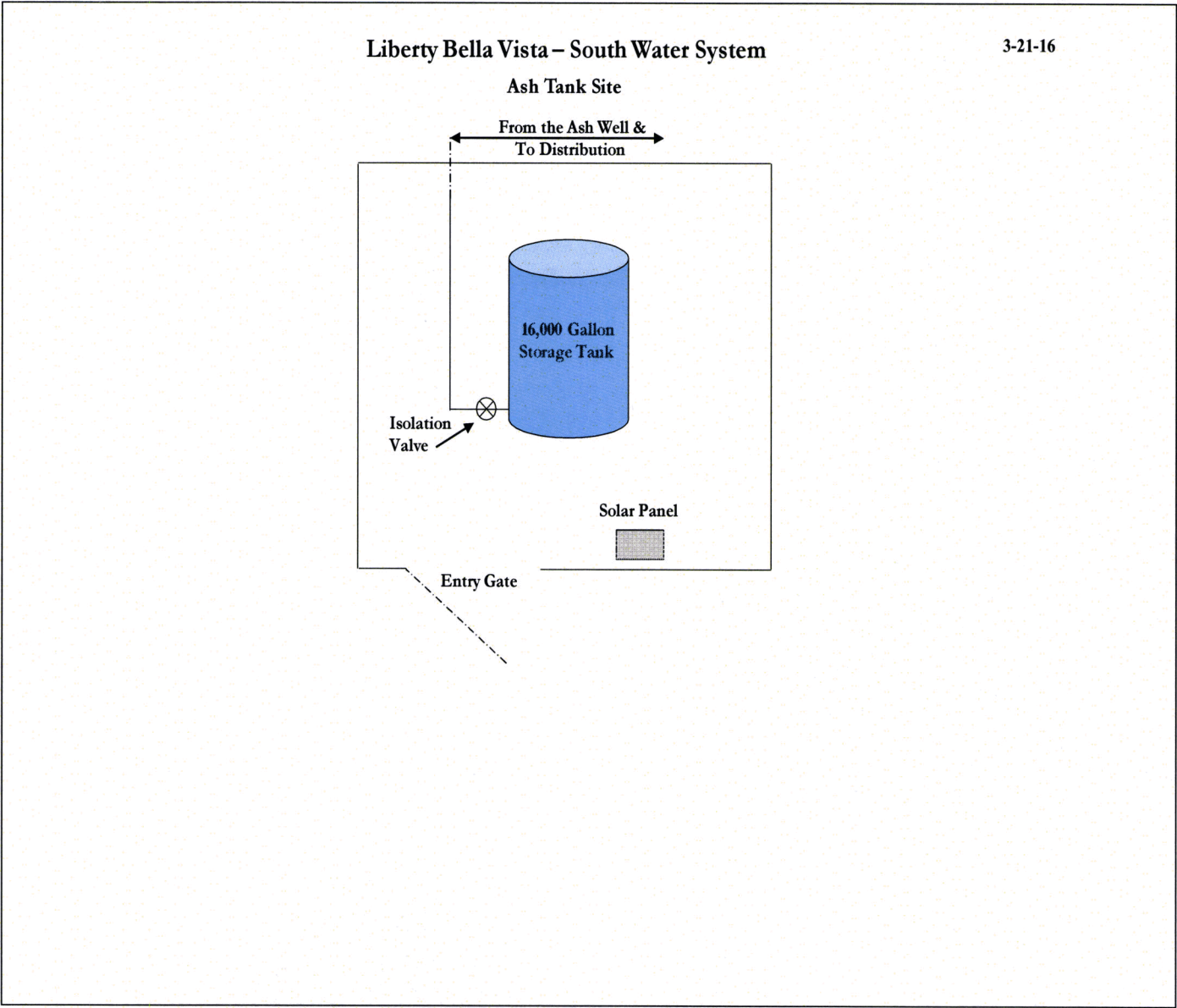


FIGURE 34 – SOUTH WATER SYSTEM ASH TANK SITE

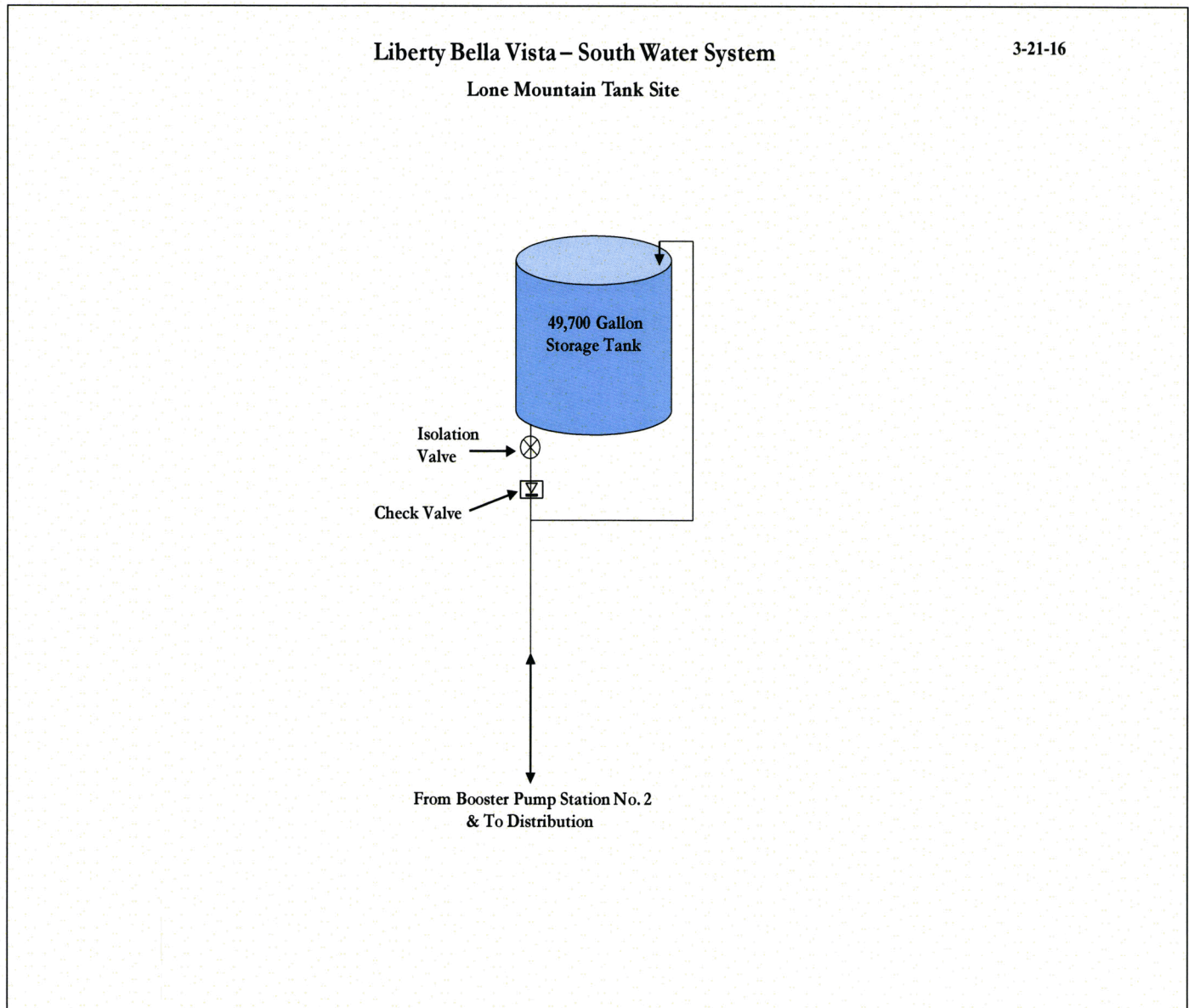


FIGURE 35 – SOUTH WATER SYSTEM LONE MOUNTAIN TANK SITE

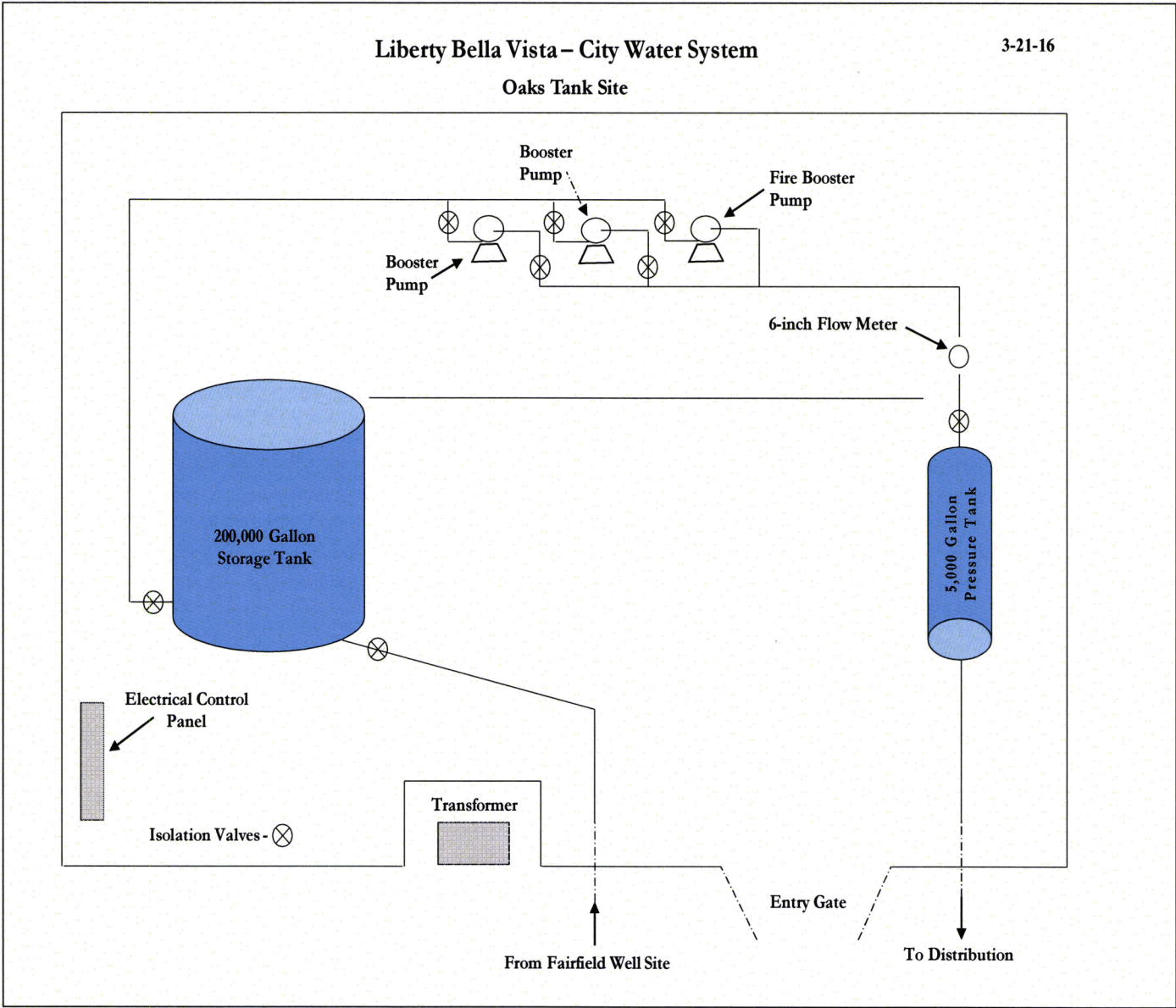


FIGURE 36 – SOUTH WATER SYSTEM OAKS TANK SITE

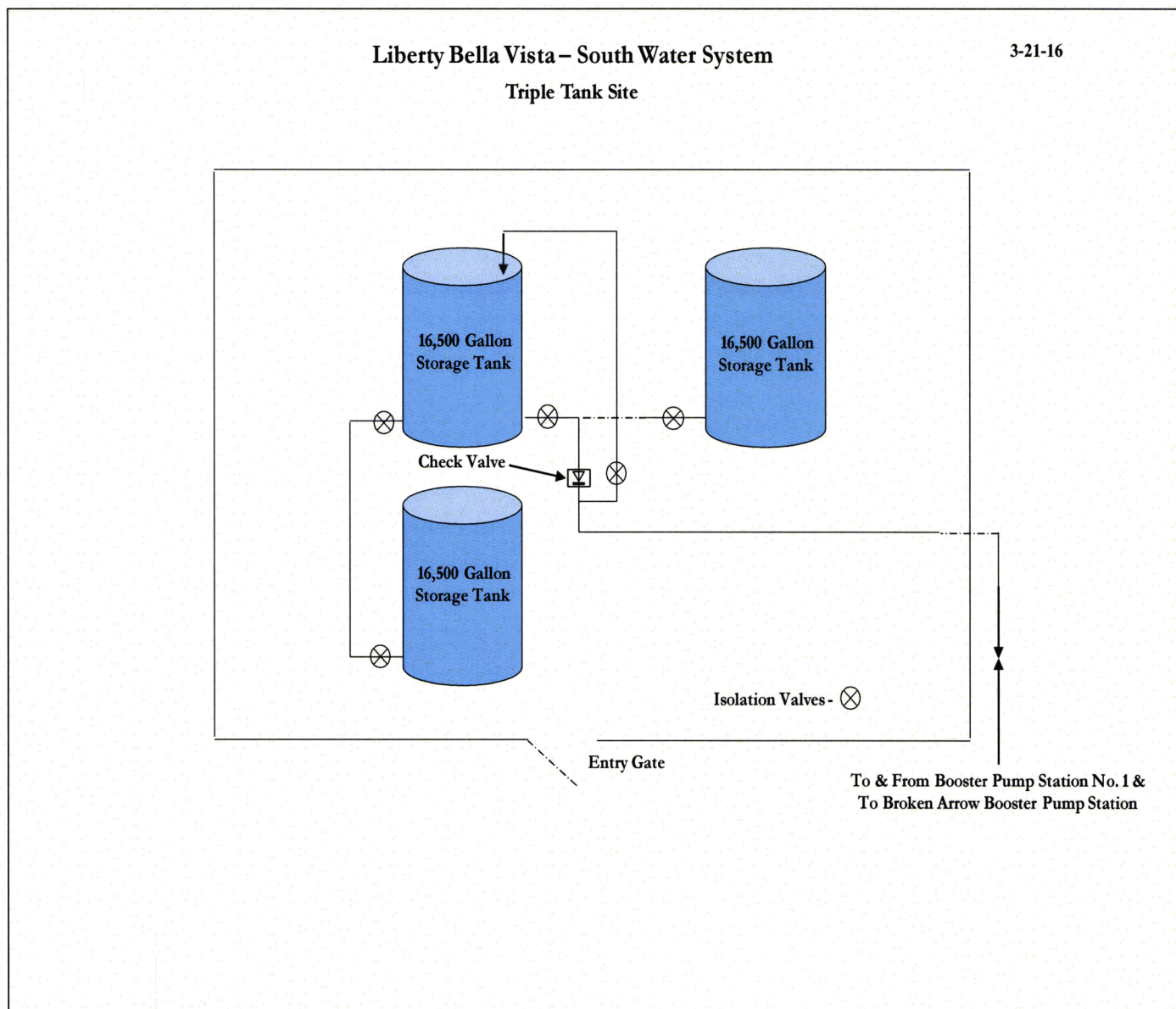


FIGURE 37 – SOUTH WATER SYSTEM TRIPLE TANK SITE

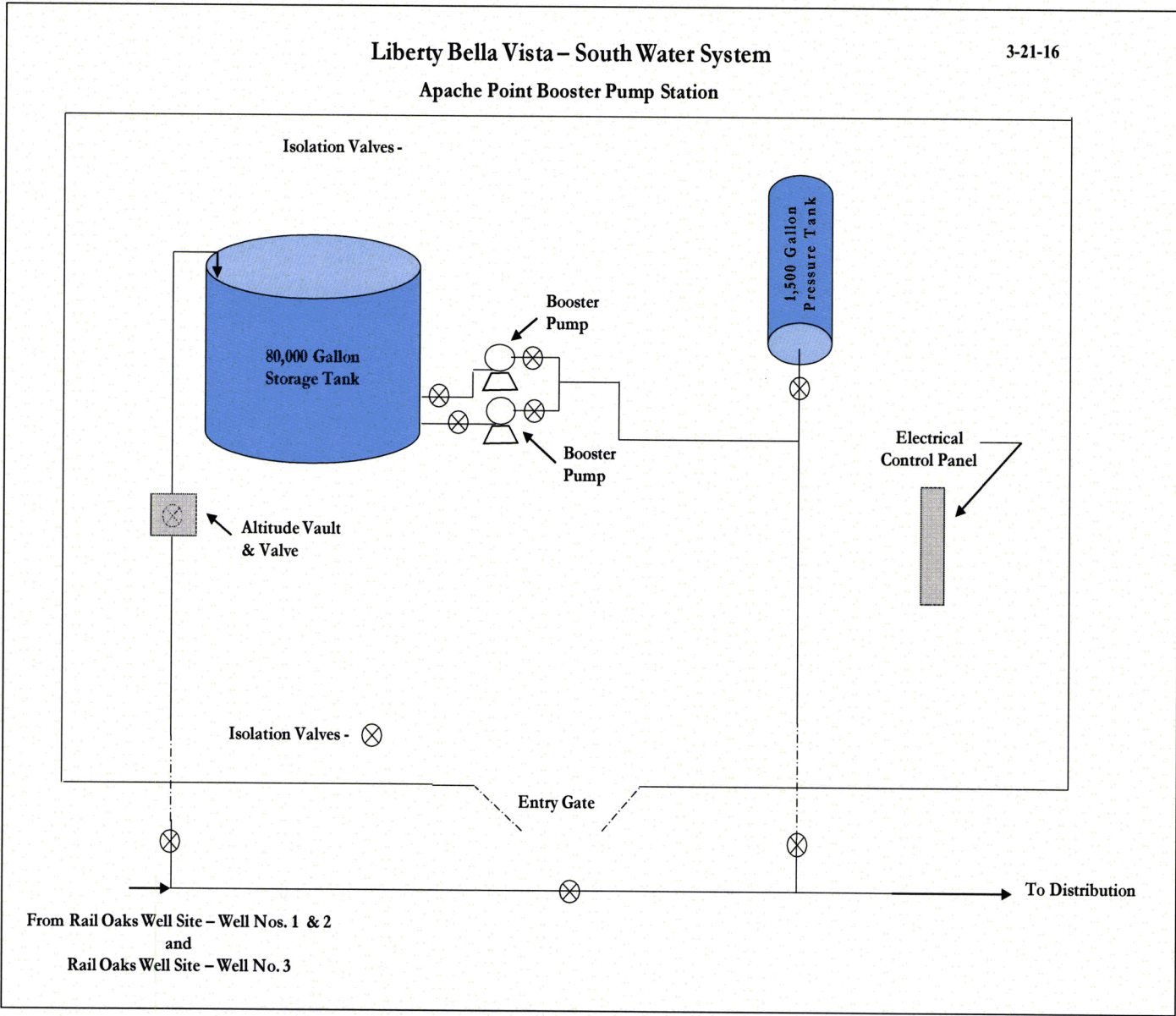


FIGURE 38 – SOUTH WATER SYSTEM APACHE POINT BOOSTER PUMP STATION

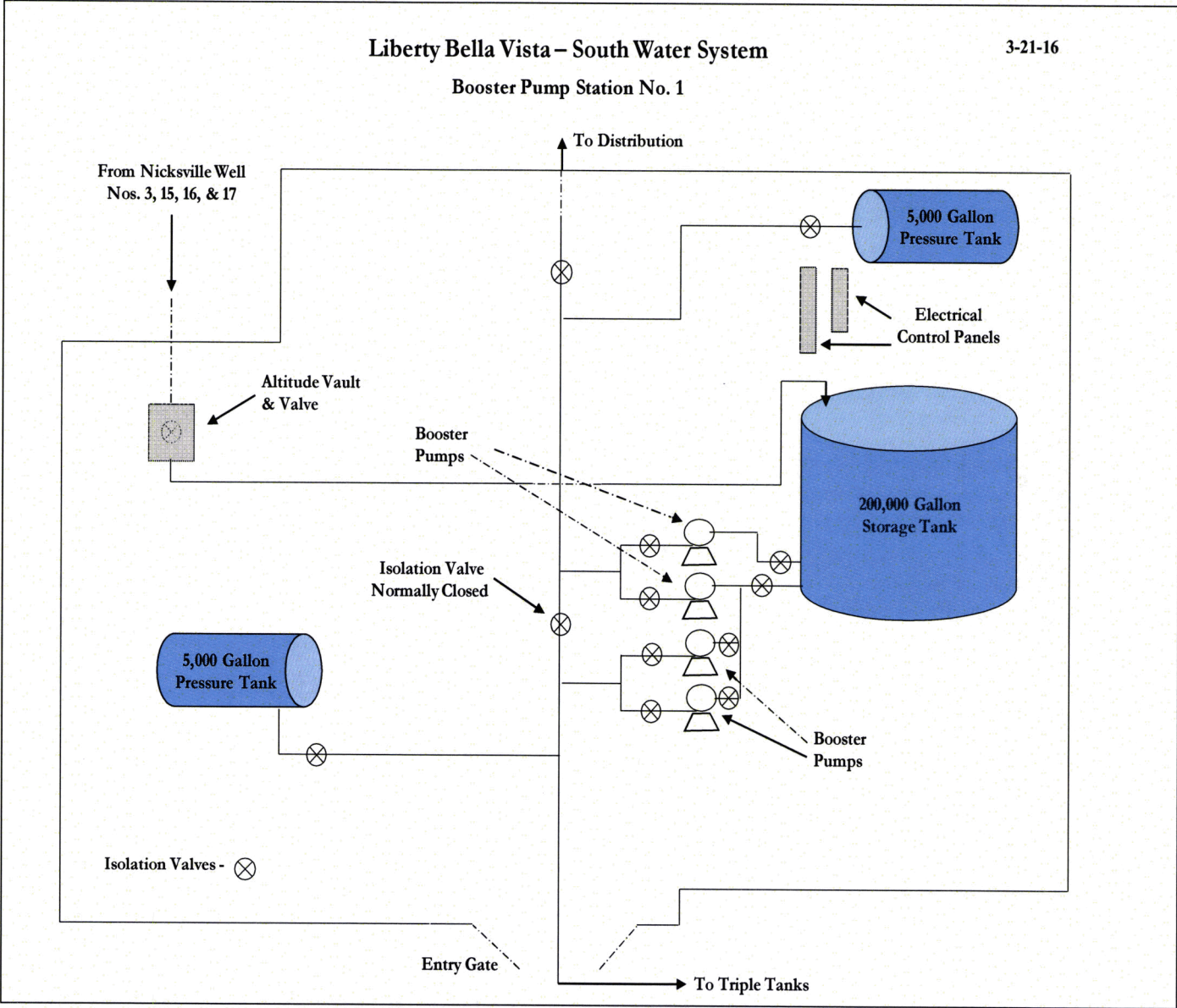


FIGURE 39 – SOUTH WATER SYSTEM BOOSTER PUMP STATION NO. 1

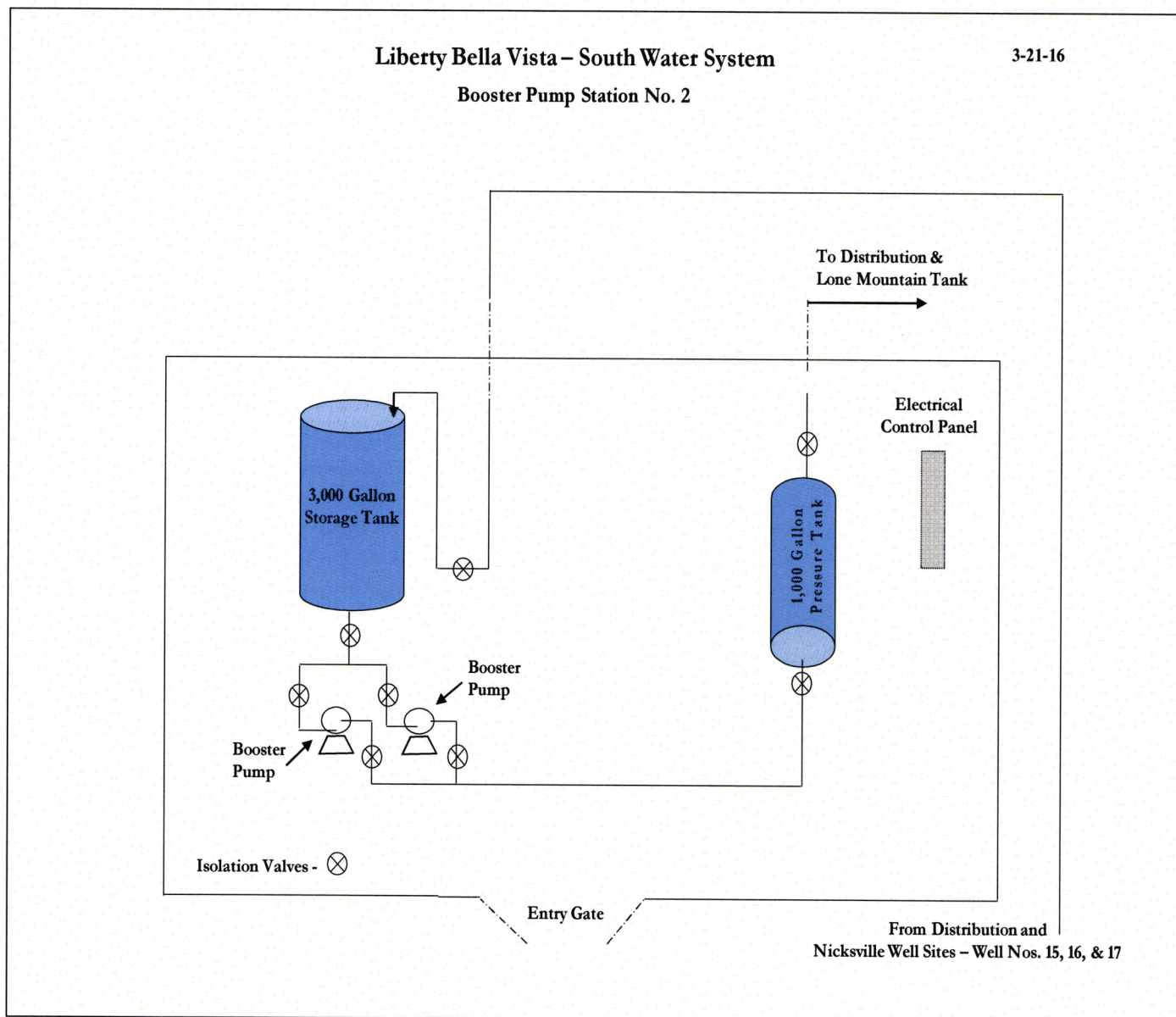


FIGURE 40 – SOUTH WATER SYSTEM BOOSTER PUMP STATION NO. 2

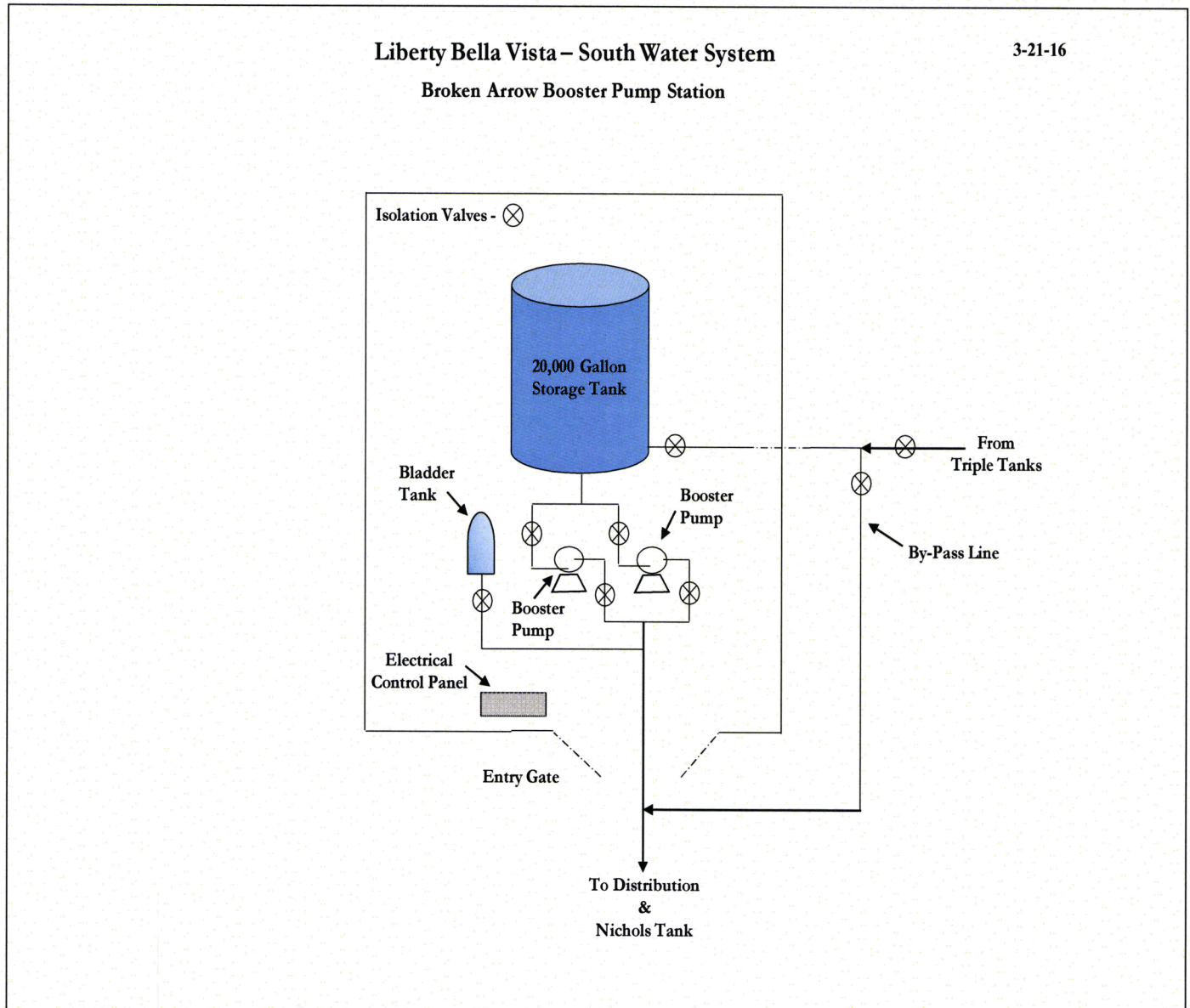


FIGURE 41 – SOUTH WATER SYSTEM BROKEN ARROW BOOSTER PUMP STATION

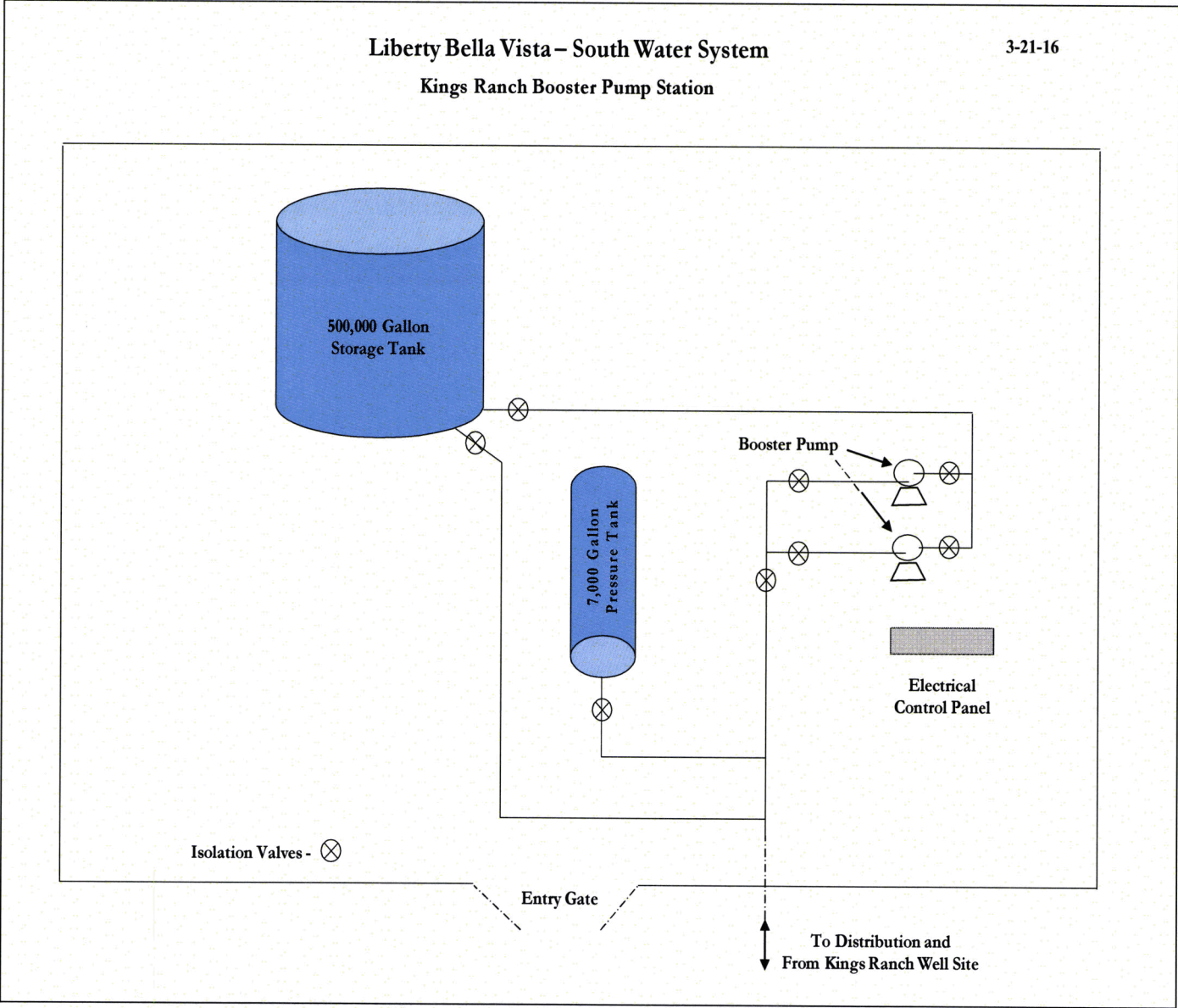


FIGURE 42 – SOUTH WATER SYSTEM KINGS RANCH BOOSTER PUMP STATION

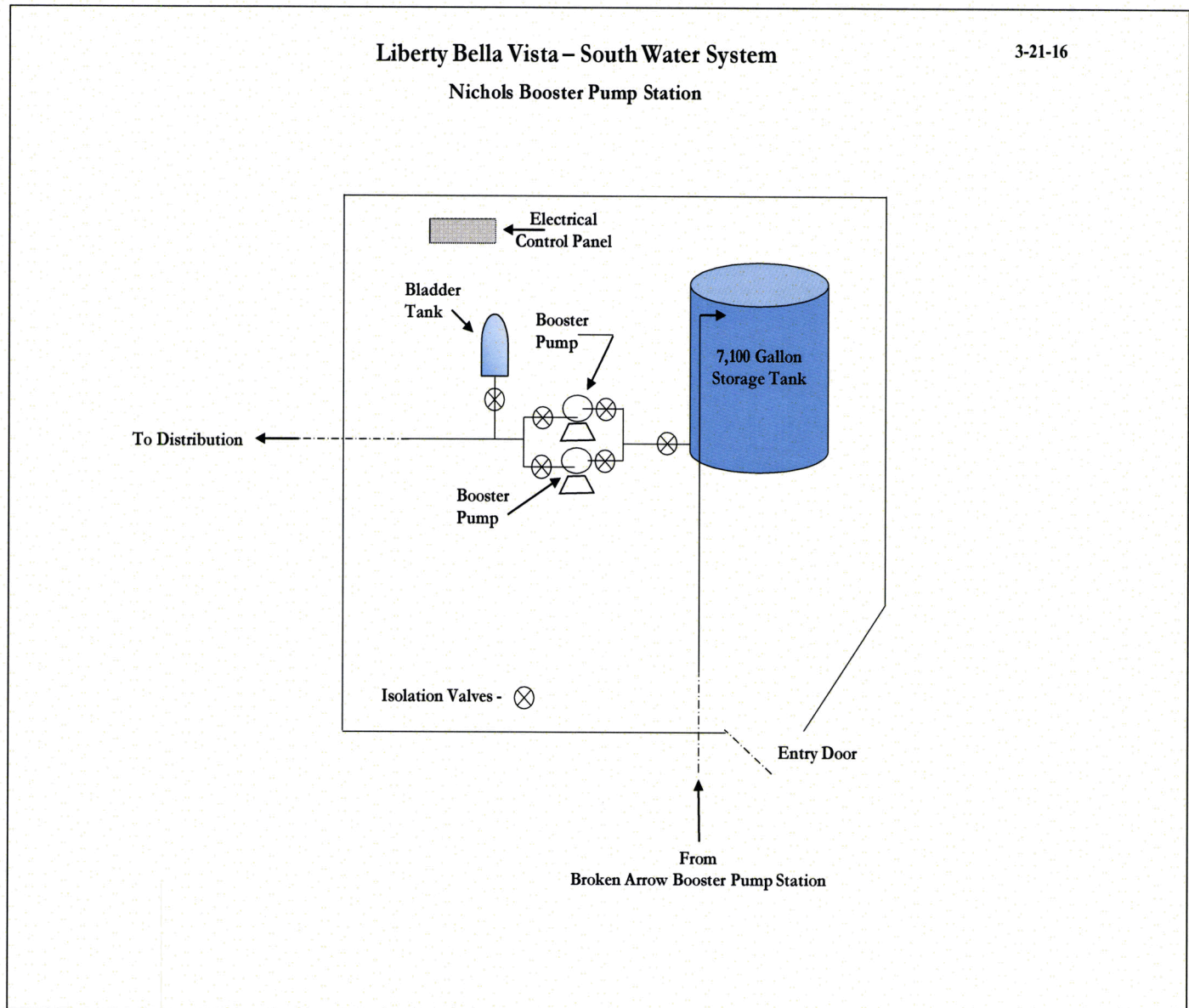


FIGURE 43 – SOUTH WATER SYSTEM NICHOLS BOOSTER PUMP STATION

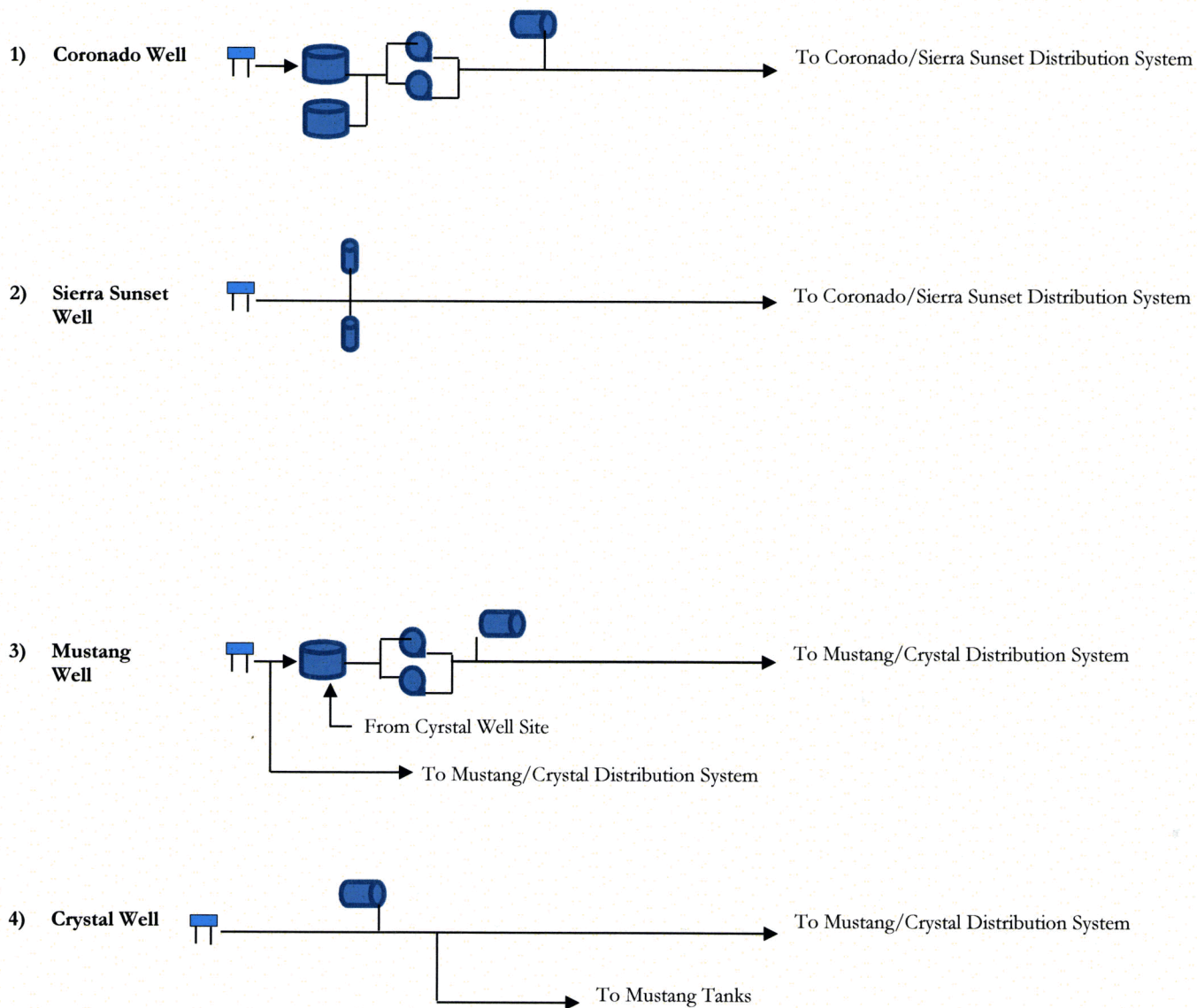


FIGURE 44 – NORTHERN SUNRISE WATER SYSTEM PLANT

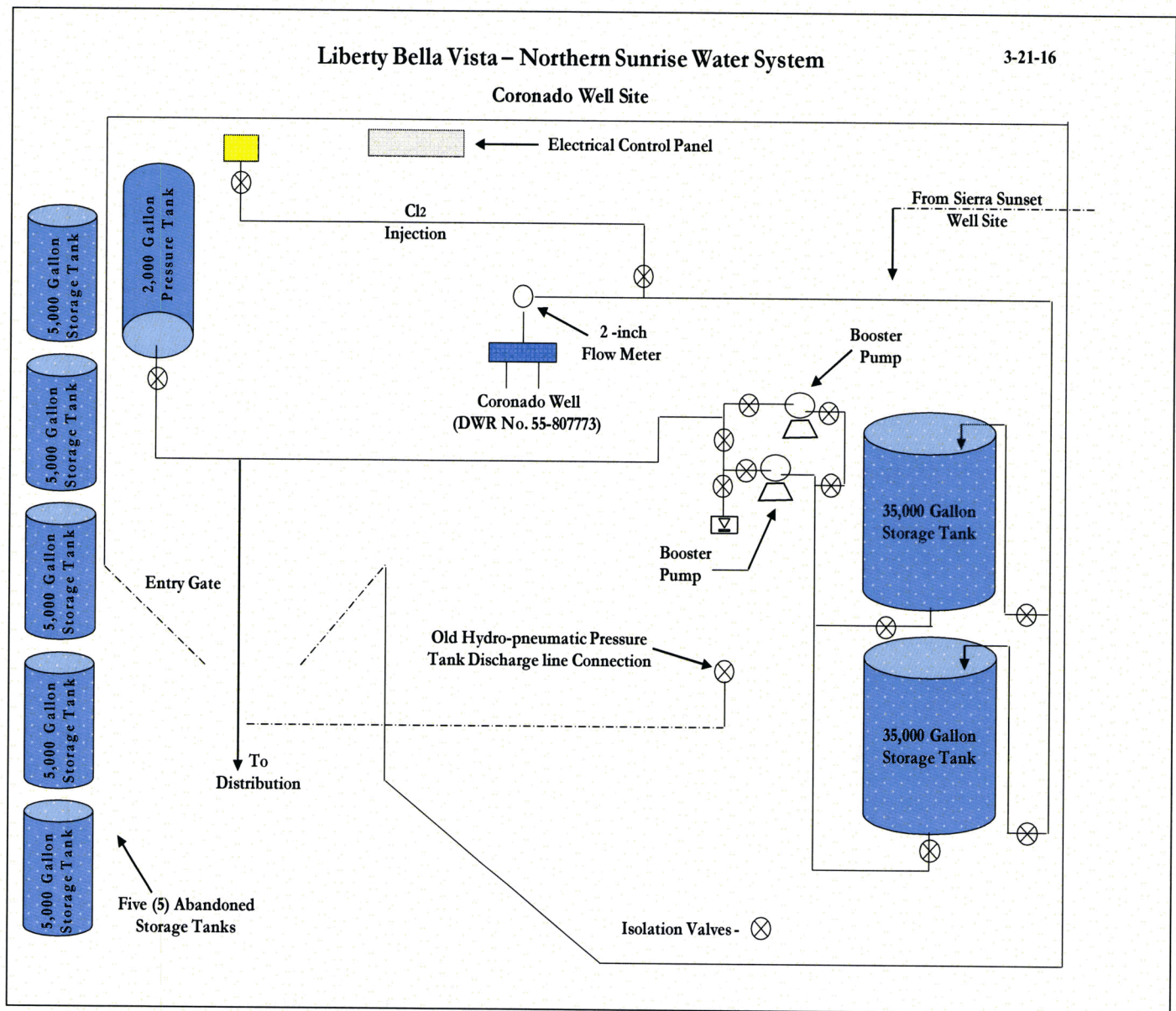


FIGURE 45 – NORTHERN SUNRISE WATER SYSTEM CORONADO WELL SITE

Liberty Bella Vista – Northern Sunrise Water System
Sierra Sunset Well Site

3-21-16

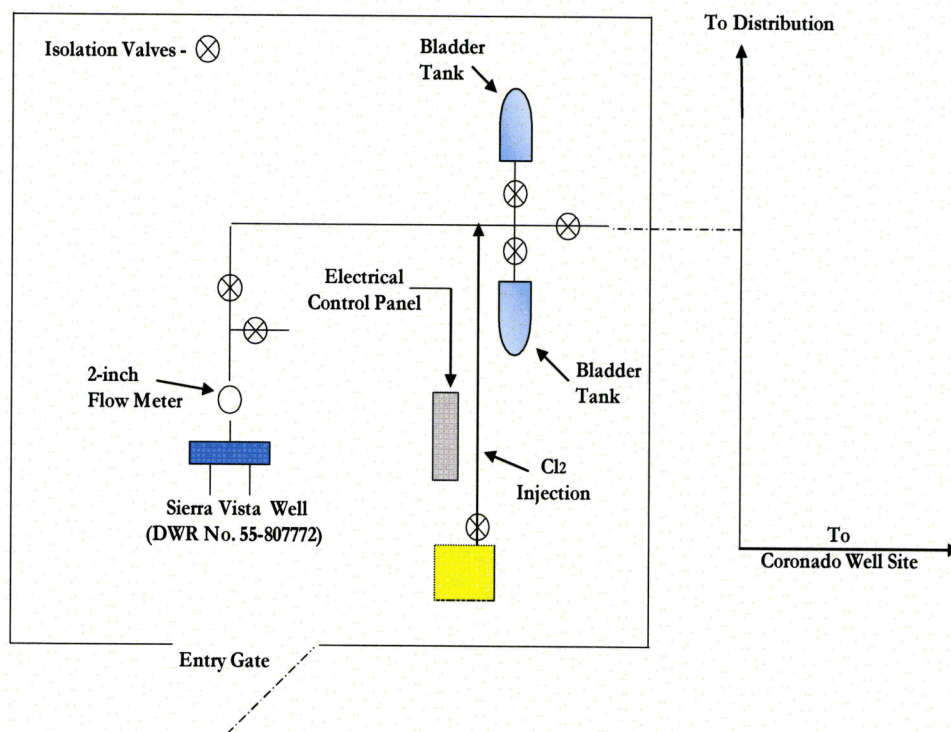


FIGURE 46 – NORTHERN SUNRISE WATER SYSTEM SIERRA SUNSET WELL SITE

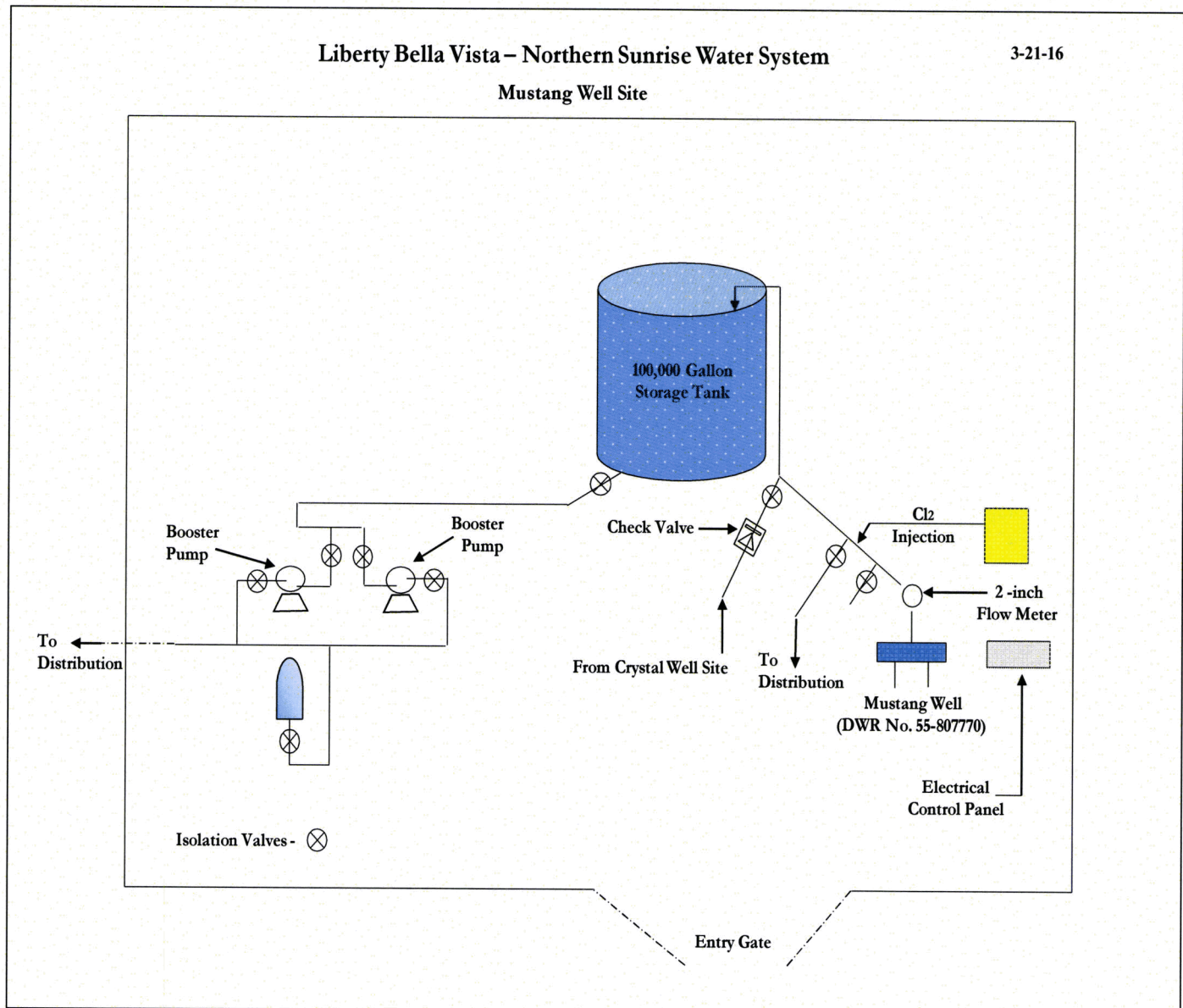


FIGURE 47 – NORTHERN SUNRISE WATER SYSTEM MUSTANG WELL SITE

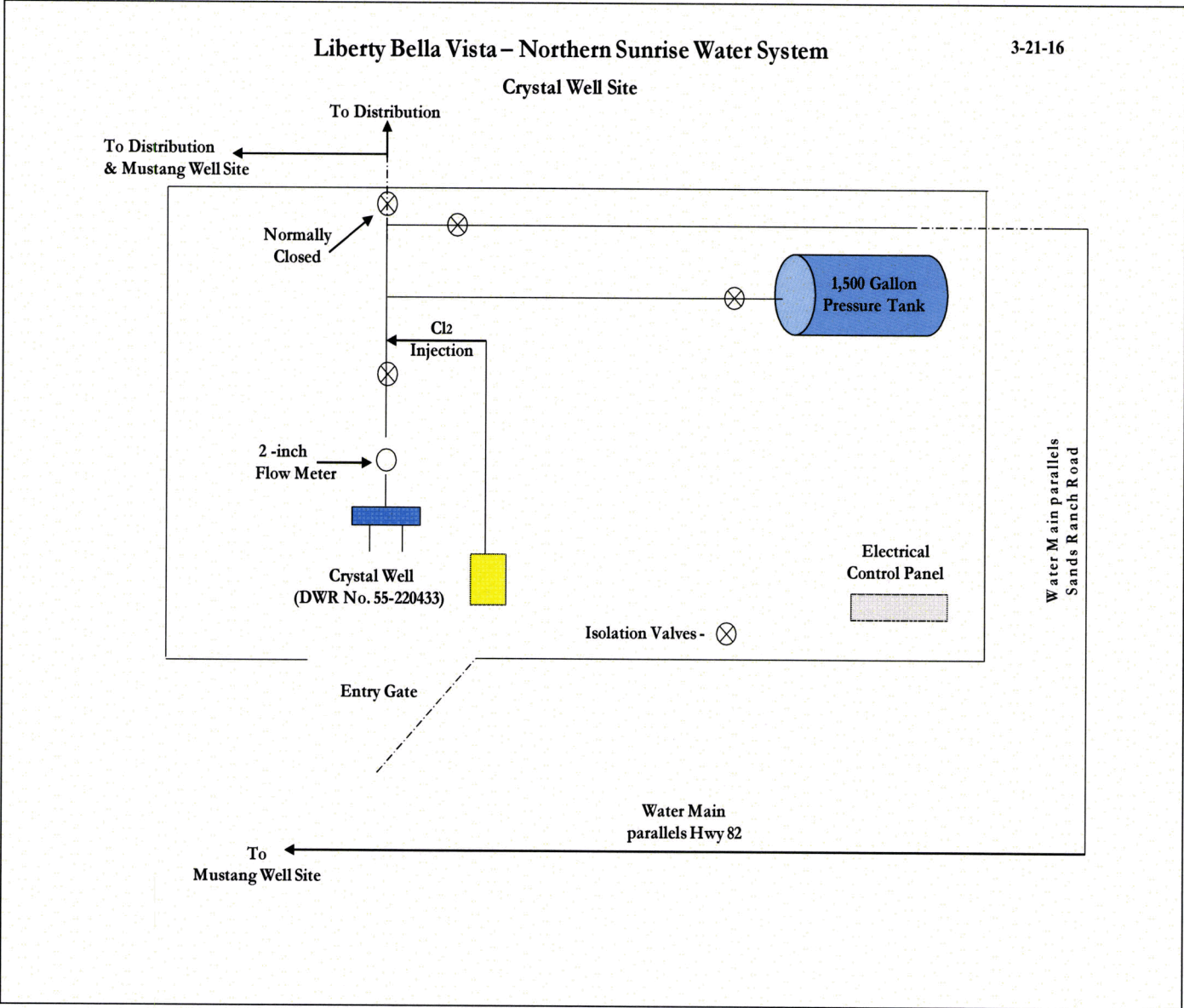


FIGURE 48 – NORTHERN SUNRISE WATER SYSTEM CRYSTAL WELL SITE

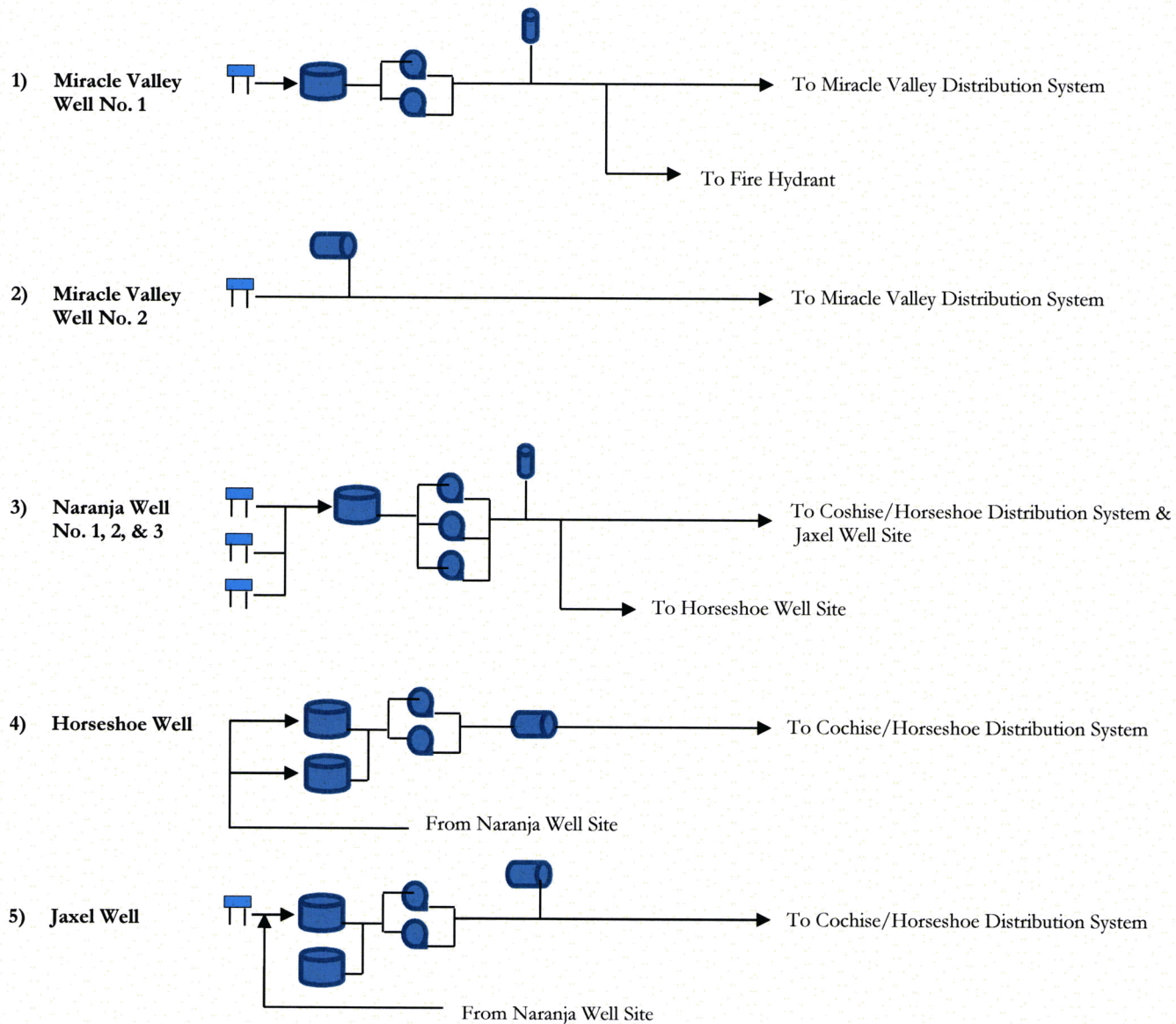


FIGURE 49 – SOUTHERN SUNRISE WATER SYSTEM PLANT

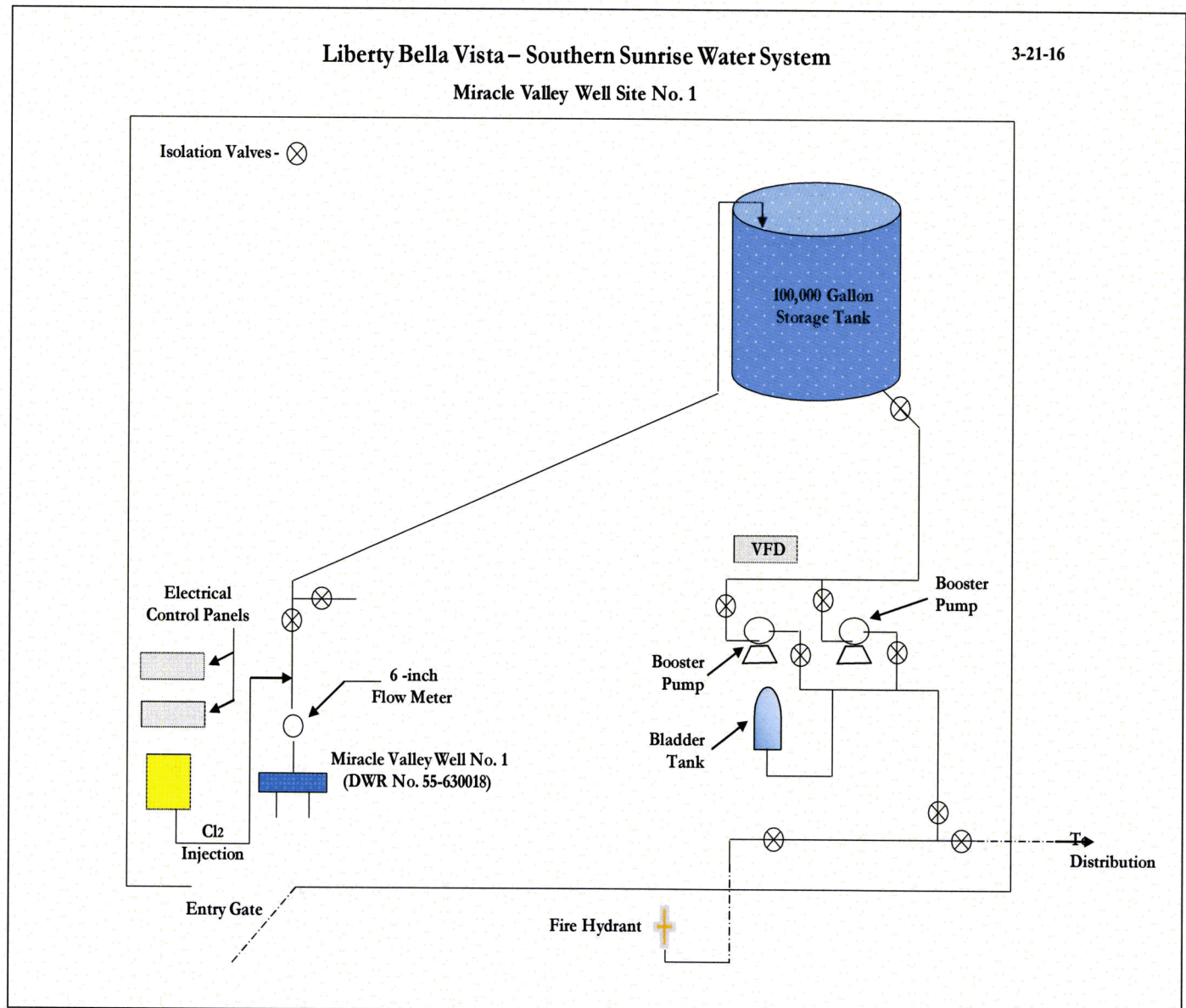


FIGURE 50 – SOUTHERN SUNRISE WATER SYSTEM MIRACLE VALLEY WELL SITE NO. 1

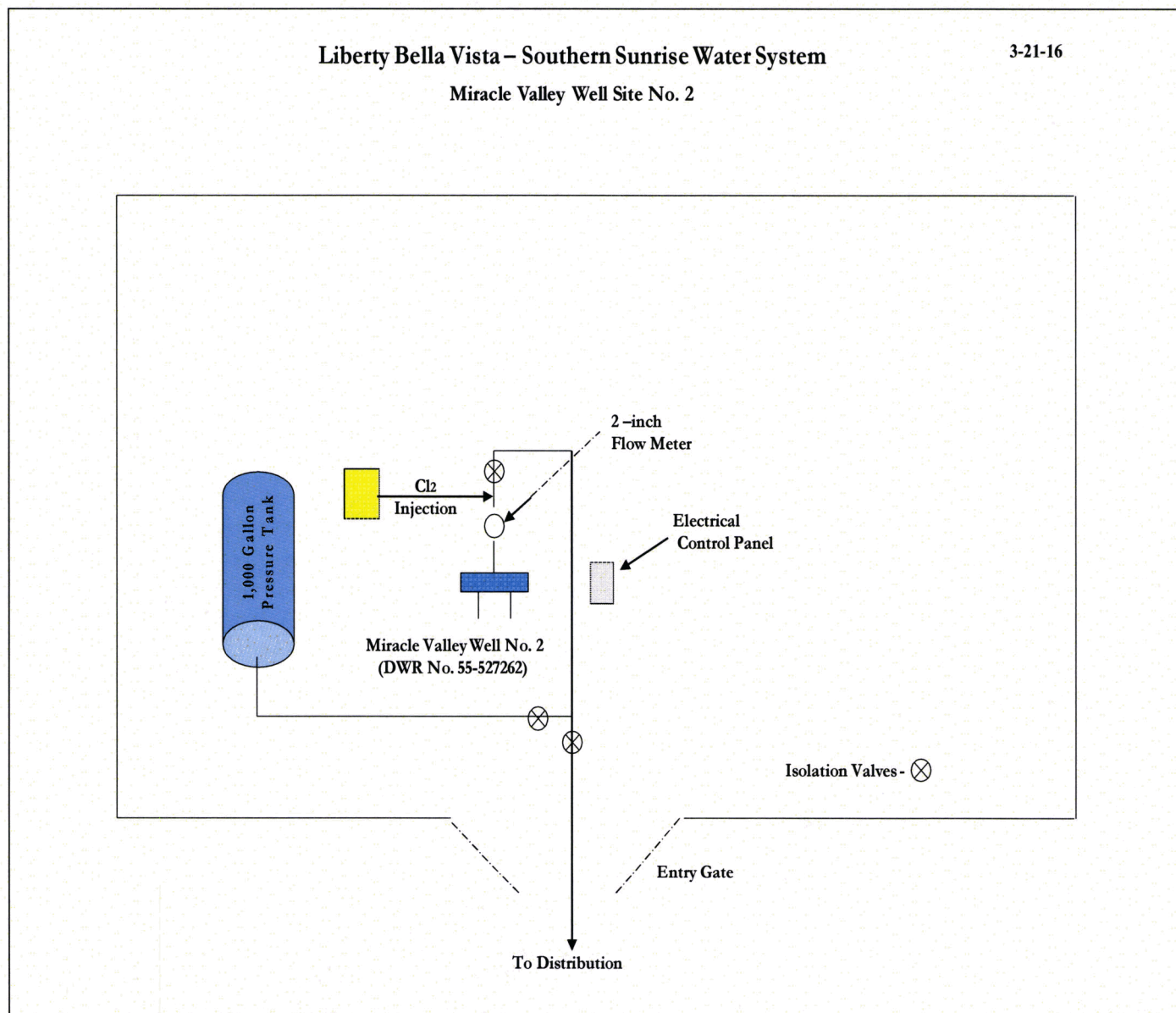


FIGURE 51 – SOUTHERN SUNRISE WATER SYSTEM MIRACLE VALLEY WELL SITE NO. 2

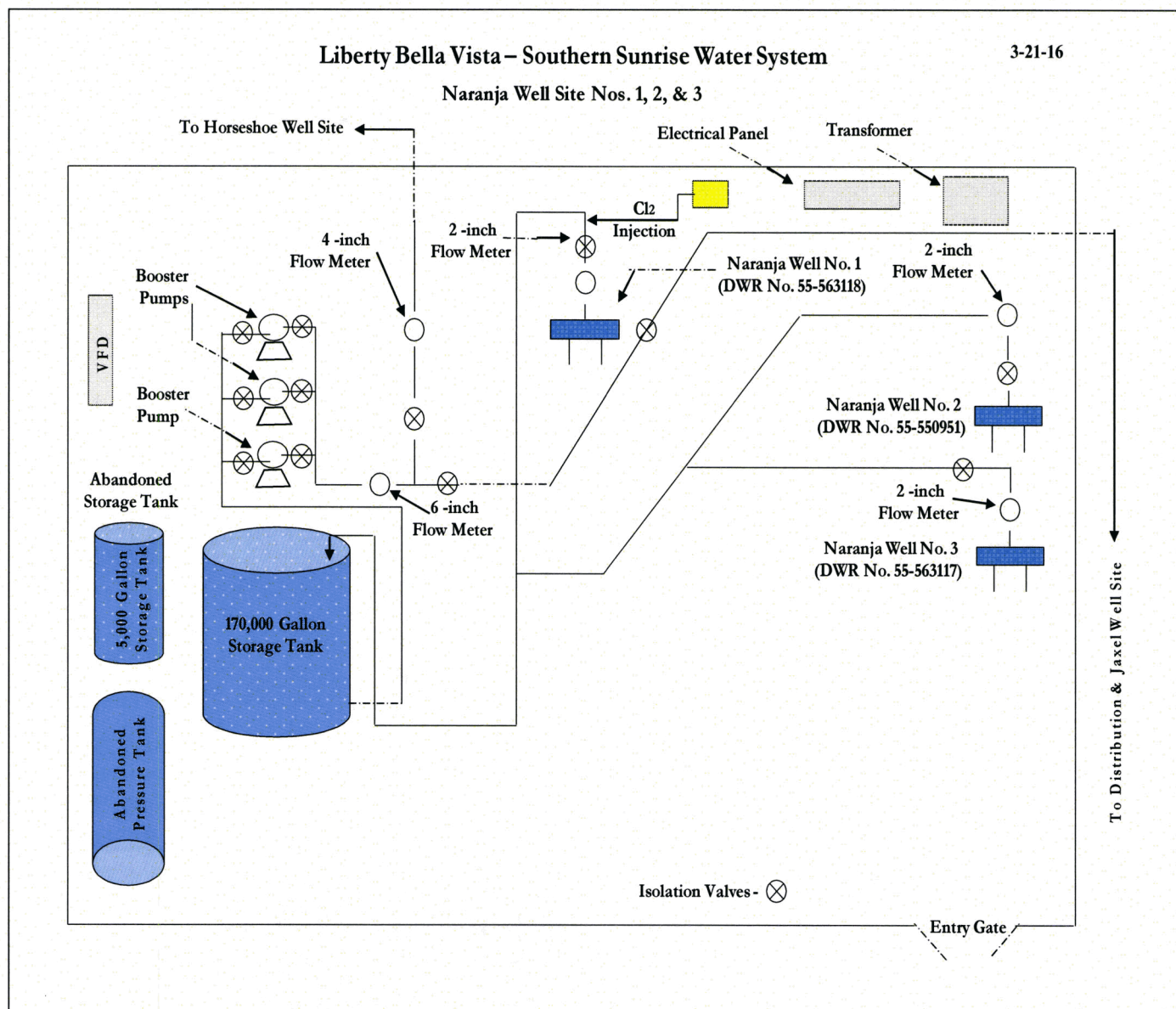


FIGURE 52 – SOUTHERN SUNRISE WATER SYSTEM NARANJA WELL SITE NOS. 1, 2, & 3

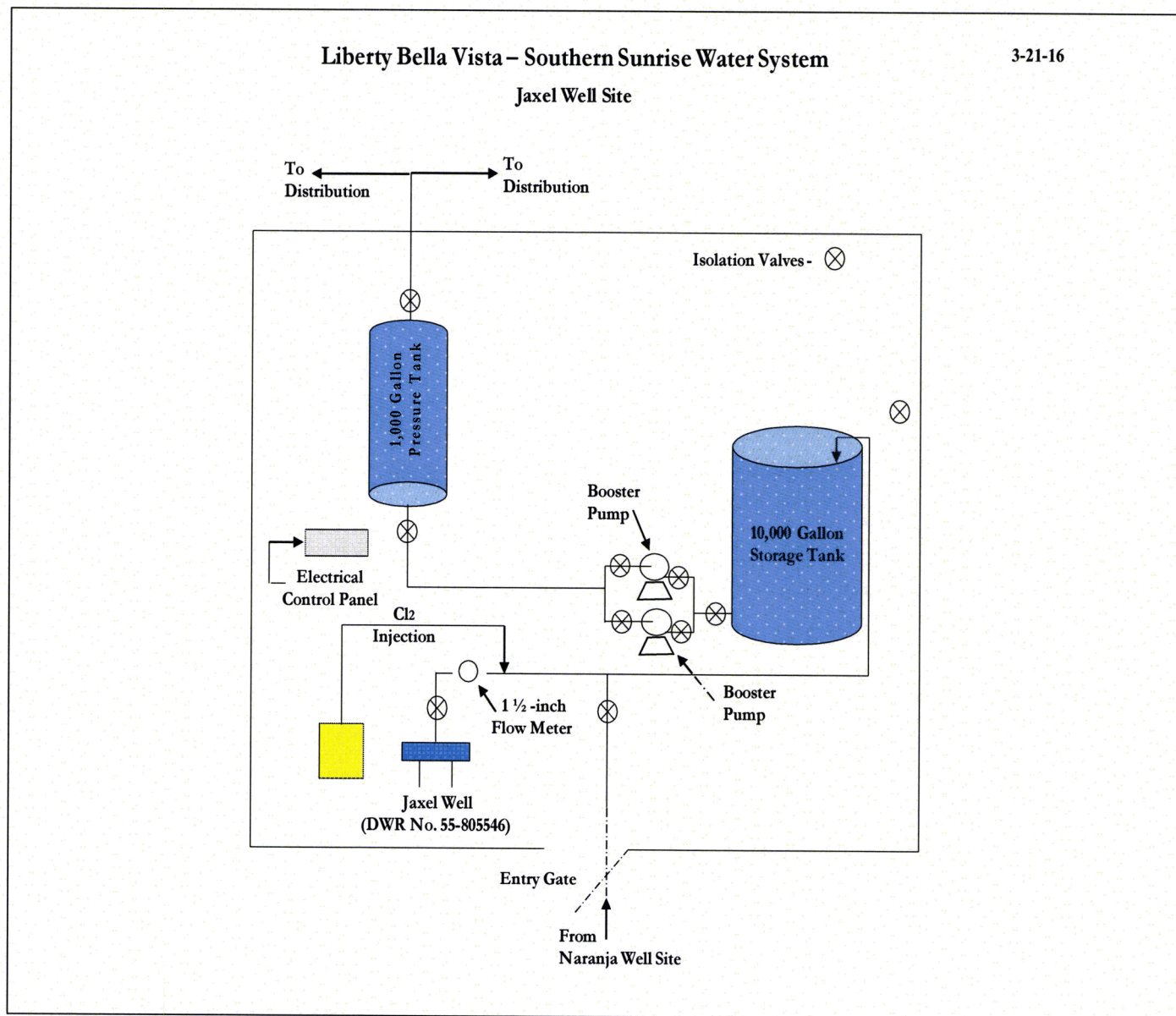


FIGURE 53 – SOUTHERN SUNRISE WATER SYSTEM JAXEL WELL SITE

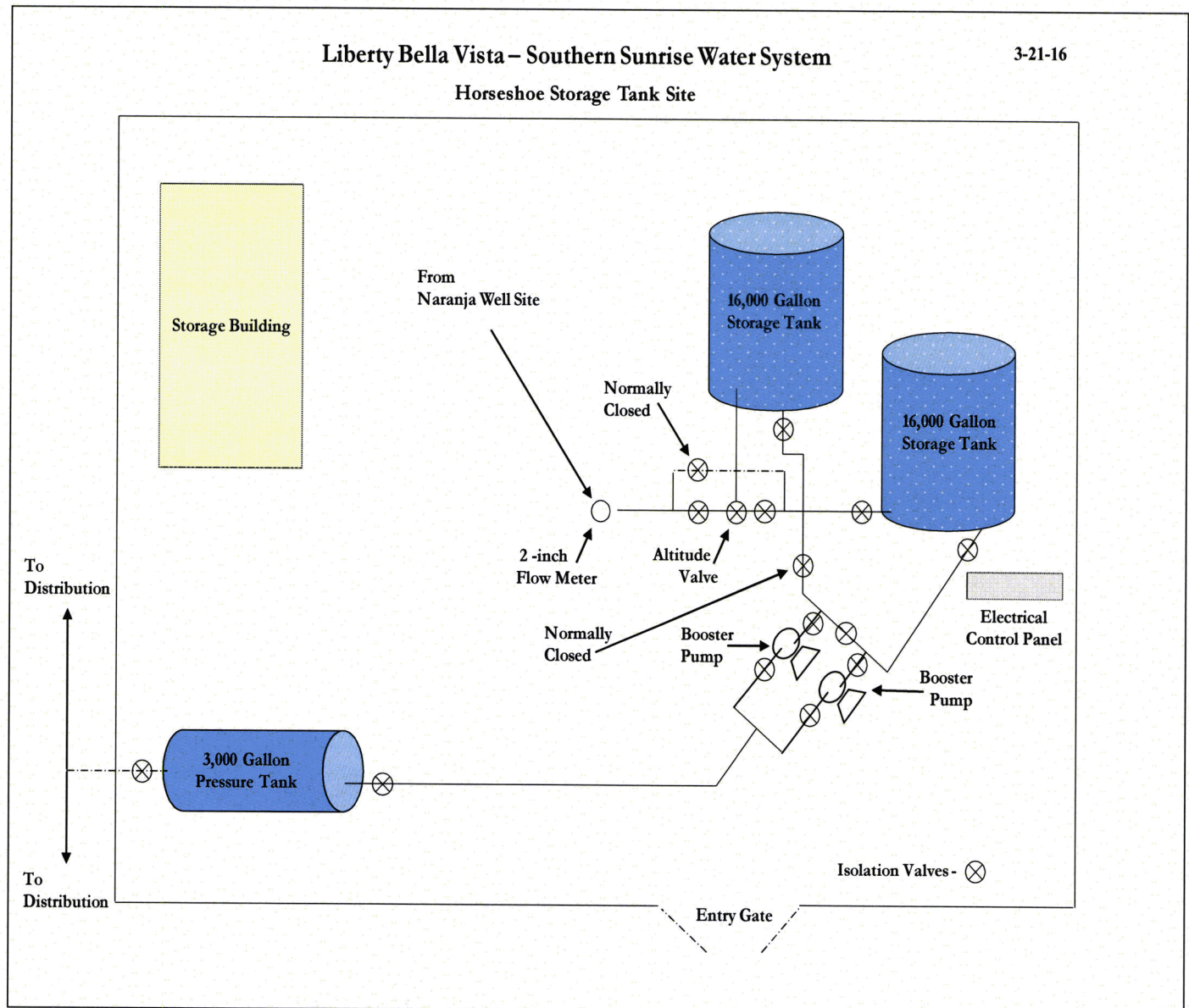


FIGURE 54 – SOUTHERN SUNRISE WATER SYSTEM HORSESHOE STORAGE TANK SITE

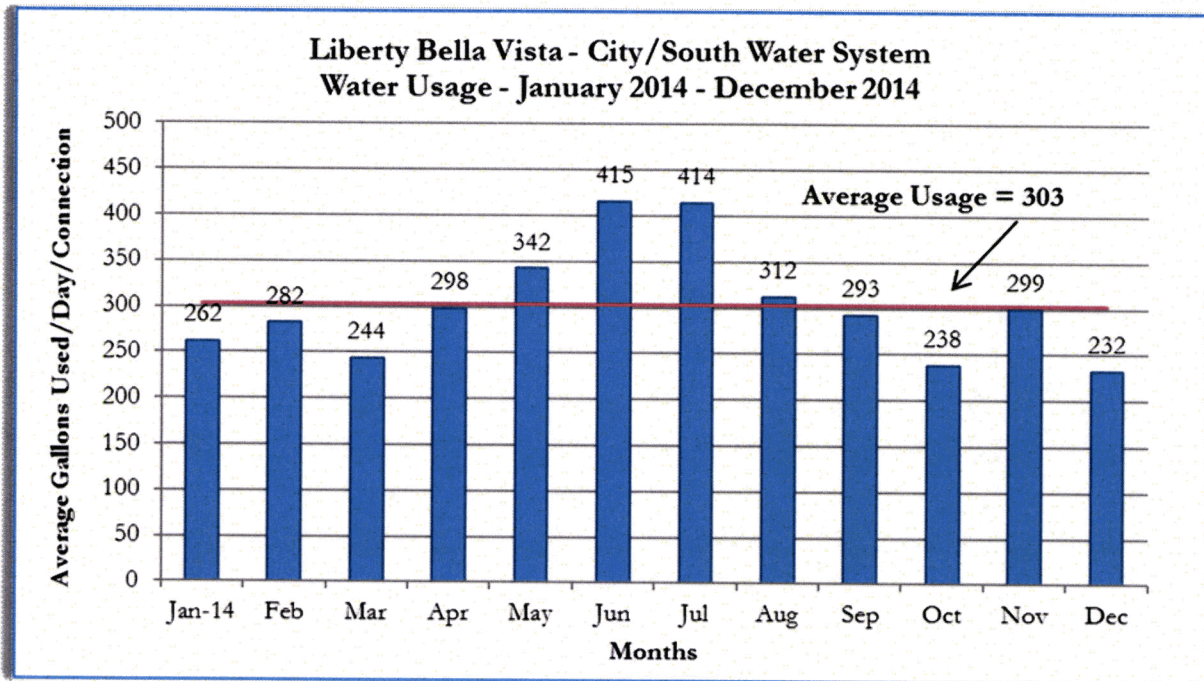


FIGURE 55 – LIBERTY BELLA VISTA CITY/SOUTH WATER CONSUMPTION

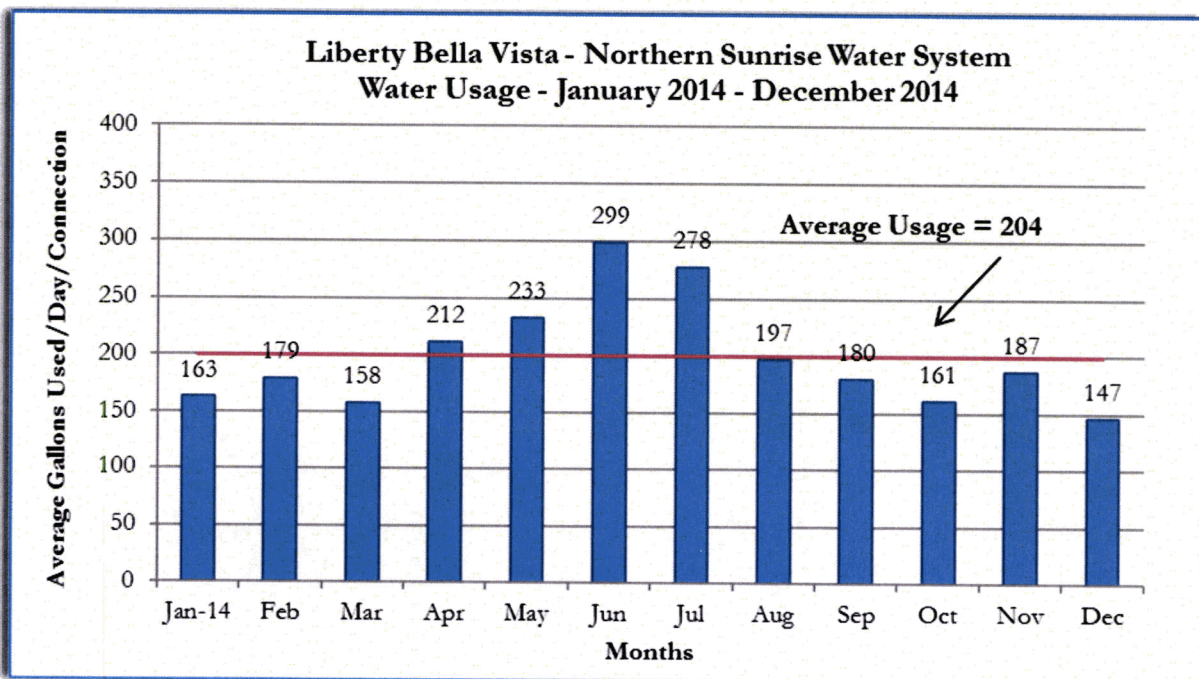


FIGURE 56 – NORTHERN SUNRISE WATER CONSUMPTION

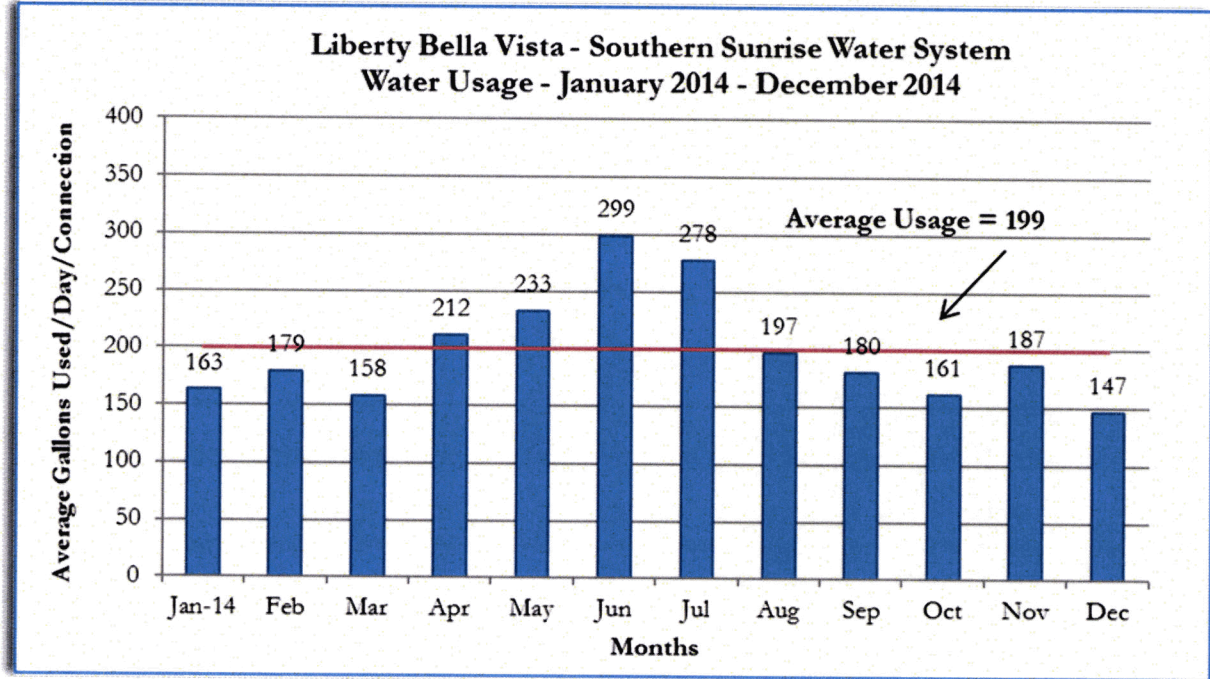


FIGURE 57 – SOUTHERN SUNRISE WATER CONSUMPTION

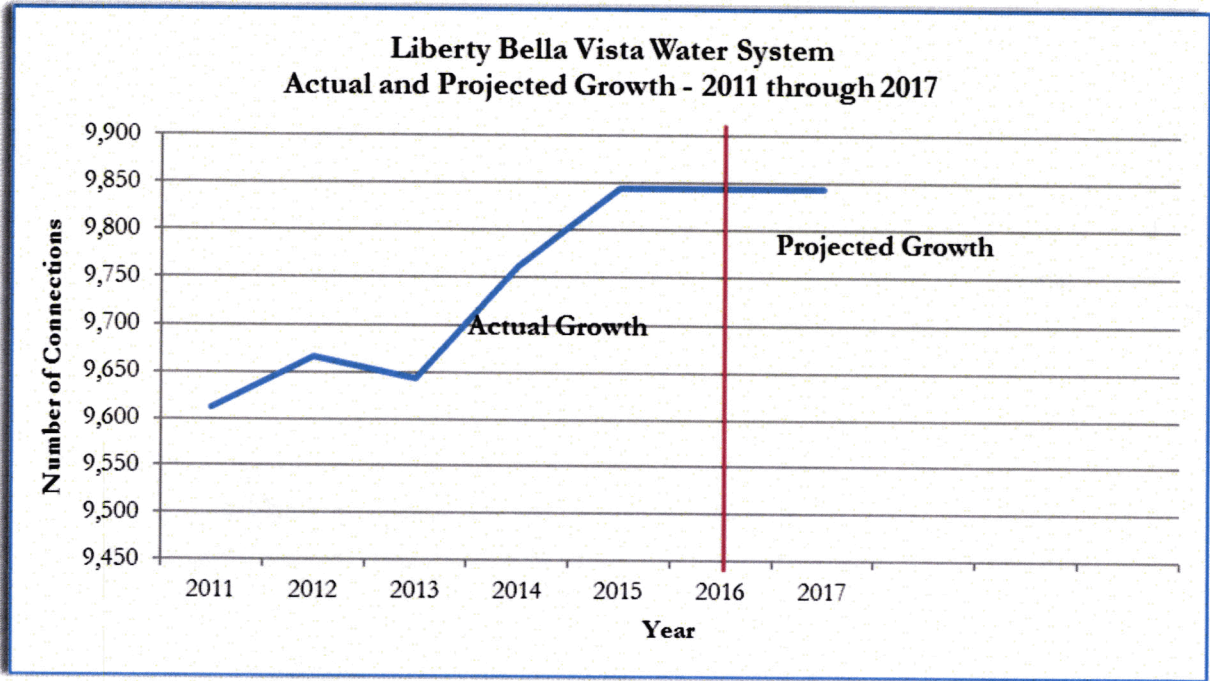


FIGURE 58 – LIBERTY BELLA VISTA GROWTH

Liberty Utilities (Bella Vista Water) Corporation
Docket No. W-02465A-15-0367, ET AL.
March 23, 2016
Page 88

ATTACHMENTS

Applies to all WATER service areas
STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

IV. CROSS-CONNECTION OR BACKFLOW TARIFF**PURPOSE.**

The purpose of this tariff is to protect Liberty Utilities (Bella Vista Water) Corp. ("Company") from the possibility of contamination caused by the backflow of contaminants that may be present on the customer's premises by requiring the installation and periodic testing of backflow prevention assemblies pursuant to the provisions of Arizona Administrative Code (A.A.C.) R14-2-405.B.6 and A.A.C. R18-4-215.

REQUIREMENTS.

In compliance with the rules and regulations of the Arizona Corporation Commission ("Commission") and the Arizona Department of Environmental Quality ("ADEQ"), specifically A.A.C. R14-2-405.B.6 and A.A.C. R18-4-215 relating to backflow prevention:

1. The Company may require a customer to pay for and install a backflow-prevention assembly if A.A.C. R18-4-215.B or C applies.
2. Any backflow-prevention assembly required to be installed by the customer under Paragraph 1 of this tariff shall comply with the requirements set forth in A.A.C. R18-4-215.D and E.
3. Subject to the provision of A.A.C. R14-2-407 and 410 and in accordance with Paragraphs 1 and 7 of this tariff, the Company may terminate service or may deny service to a customer who fails to install a backflow-prevention assembly as required by this tariff.
4. The Company shall give any existing customer who is required to install a backflow-prevention assembly written notice of said requirement. If A.A.C. R14-2-410.B.1.a. is **not** applicable, the customer shall be given thirty (30) days from the time such written notice is received in which to comply with this notice. If the customer can show good cause as to why she or he cannot install the device within thirty (30) days, the Company or Commission Staff may suspend this requirement for a reasonable period of time.

Issued: _____

ISSUED BY:

Effective: _____

Matthew Garlick, President
Liberty Utilities (Bella Vista Water Corp.)
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WATER service areas
STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

5. Testing shall be in conformance with the requirement of A.A.C. R18-4-215.F. The Company may require the customer to pay to have the backflow-prevention assembly tested as long as the Company does not require an unreasonable number of tests. The Company may also require the customer to pay for repairs to a backflow-prevention assembly.
6. The customer shall provide the Company with records of installation and testing. For each backflow-prevention assembly, these records shall include:
 - a. assembly identification number and description;
 - b. location;
 - c. date(s) of test(s);
 - d. description of repairs and recommendations for repairs made by tester; and
 - e. the tester's name and certification number.
7. In the event the backflow-prevention assembly does not function properly or fails any test, and an obvious hazard as contemplated under A.A.C. R14-2-410.B.1.a. exists, the Company may terminate service immediately and without notice. The backflow-prevention assembly shall be repaired or replaced by the customer and retested before service is restored.
8. In the event the backflow-prevention assembly does not function properly or fails any test, or in the event that a customer fails to comply with the testing requirement, and A.A.C. R14-2-410.B.1.a. is **not** applicable, the backflow-prevention assembly shall be repaired or replaced within fourteen (14) days of the initial discovery of the deficiency in the assembly or its function. Failure to remedy the deficiency or dysfunction of the assembly, or failure to retest, shall be grounds for termination of water service in accordance with A.A.C. R14-2-410.

Issued: _____

ISSUED BY:

Effective: _____

Matthew Garlick, President
Liberty Utilities (Bella Vista Water Corp.)
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

LIBERTY UTILITIES (BELLA VISTA WATER) CORP.

Sheet No. ____

DOCKET NO. _____

Cancelling Sheet No. ____

**CURTAILMENT PLAN FOR
LIBERTY UTILITIES (BELLA VISTA WATER) CORP.**

Bella Vista City
ADEQ Public Water System Number: 02-010

Bella Vista South
ADEQ Public Water System Number: 02-007

Northern Sunrise (Coronado/Sierra Sunset)
ADEQ Public Water System Number: 02-013

Northern Sunrise (Mustang/Crystal)
ADEQ Public Water System Number: 02-054

Southern Sunrise (Cochise)
ADEQ Public Water System Number: 02-011

Southern Sunrise (Miracle Valley)
ADEQ Public Water System Number: 02-023

Liberty Utilities (Bella Vista Water) Corp. ("Company") is authorized to curtail water service to all customers within its certified area under the terms and conditions listed in this tariff.

This curtailment plan shall become part of the Arizona Department of Environmental Quality Emergency Operations Plan for the Company.

The Company shall notify its customers of this new tariff as part of its next regularly scheduled billing after the effective date of the tariff or no later than sixty (60) days after the effective date of the tariff.

The Company shall provide a copy of the curtailment tariff to any customer, upon request.

Stage 1 Exists When:

Company is able to maintain water storage in the system at 100 percent of capacity and there are no known problems with its well production or water storage in the system.

Restrictions: Under Stage 1, the Company is deemed to be operating normally and no curtailment is necessary.

Notice Requirements: Under Stage 1, no notice is necessary.

Stage 2 Exists When:

- a. Company's water storage or well production has been less than 80 percent of capacity for at least 48 consecutive hours, and

Issued: _____

ISSUED BY:

Effective: _____

Matthew Garlick, President
Liberty Utilities (Bella Vista Water) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

- b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, or poor water production, creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 2, the Company may request the customers to voluntarily employ water conservation measures to reduce water consumption by approximately 50 percent. Outside watering should be limited to essential water, dividing outside watering on some uniform basis (such as even and odd days) and eliminating outside watering on weekends and holidays.

Notice Requirements: Under Stage 2, the Company is required to notify customers by delivering written notice door to door at each service address, or by United States first class mail to the billing address or, at the Company's option, both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

Stage 3 Exists When:

- a. Company's total water storage or well production has been less than 50 percent of capacity for at least 24 consecutive hours, and
- b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, or poor water production, creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 3, the Company shall request the customer to voluntarily employ water conservation measures to reduce daily consumption by approximately 50 percent. All outside watering should be eliminated, except livestock, and indoor water conservation techniques should be employed whenever possible. Standpipe service shall be suspended.

Notice Requirements:

1. Company is required to notify customers by delivering written notice to each service address, or by United States first class mail to the billing address or, at the Company's option, both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.
2. Beginning with Stage 3, the Company shall post at least two (2) signs showing the curtailment stage. Signs shall be posted at noticeable locations, like at the well sites and at the entrance to major subdivisions served by the Company.
3. The Company shall notify the Consumer Services Section of the Utilities Division of the Corporation Commission at least 12 hours prior to entering Stage 3.

Once Stage 3 has been reached, the Company must begin to augment the supply of water by either hauling or through an emergency interconnect with an approved water supply in an attempt to maintain the curtailment at a level no higher than Stage 3 until a permanent solution has been implemented.

Stage 4 Exists When:

- a. Company's total water storage or well production has been less than 25 percent of capacity for at least 12 consecutive hours, and

Issued: _____

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Effective: _____

Matthew Garlick, President
Liberty Utilities (Bella Vista Water) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

- b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, or poor water production, creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 4, Company shall inform the customers of a **mandatory** restriction to employ water conservation measures to reduce daily consumption. Failure to comply will result in customer disconnection. The following uses of water shall be prohibited:

- Irrigation of outdoor lawns, trees, shrubs, or any plant life is prohibited
- Washing of any vehicle is prohibited
- The use of water for dust control or any outdoor cleaning uses is prohibited
- The use of drip or misting systems of any kind is prohibited
- The filling of any swimming pool, spas, fountains or ornamental pools is prohibited
- The use of construction water is prohibited
- Restaurant patrons shall be served water only upon request
- Any other water intensive activity is prohibited

The Company's operation of its standpipe service is prohibited. The addition of new service lines and meter installations is prohibited.

Notice Requirements:

1. Company is required to notify customers by delivering written notice to each service address, or by United States first class mail to the billing address or, at the Company's option, both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.
2. Company shall post at least two (2) signs showing curtailment stage. Signs shall be posted at noticeable locations, like at the well sites and at the entrance to major subdivisions served by the Company.
3. Company shall notify the Consumer Services Section of the Utilities Division of the Corporation Commission at least 12 hours prior to entering Stage 4.

Once Stage 4 has been reached, the Company must augment the supply of water by hauling or through an emergency interconnect from an approved supply or must otherwise provide emergency drinking water for its customers until a permanent solution has been implemented.

Customers who fail to comply with the above restrictions will be given a written notice to end all outdoor use. Failure to comply within two (2) working days of receipt of the notice will result in temporary loss of service until an agreement can be made to end unauthorized use of outdoor water. To restore service, the customer shall be required to pay all authorized reconnection fees. If a customer believes he/she has been disconnected in error, the customer may contact the Commission's Consumer Services Section at 1-800-222-7000 to initiate an investigation.

Issued: _____

ISSUED BY:

Effective: _____

Matthew Garlick, President
Liberty Utilities (Bella Vista Water) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER))
CORP., AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE FAIR VALUE OF)
ITS UTILITY PLANTS AND PROPERTY AND)
FOR INCREASES IN ITS WATER RATES AND)
CHARGES FOR UTILITY SERVICE BASED)
THEREON.)
_____)

DOCKET NO. W-02465A-15-0367

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (BELLA VISTA WATER))
CORP., AN ARIZONA CORPORATION, FOR)
AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$4,700,000.)
_____)

DOCKET NO. W-02465A-15-0370

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR A DETERMINATION OF THE FAIR)
VALUE OF ITS UTILITY PLANTS AND)
PROPERTY FOR INCREASES IN ITS WATER)
CHARGES FOR UTILITY SERVICE BASED)
RATES AND THEREON.)
_____)

DOCKET NO. WS-02676A-15-0368

IN THE MATTER OF THE APPLICATION OF)
LIBERTY UTILITIES (RIO RICO WATER &)
SEWER) CORP., AN ARIZONA CORPORATION,))
FOR AUTHORITY TO ISSUE EVIDENCE OF)
INDEBTEDNESS IN AN AMOUNT NOT TO)
EXCEED \$8,900,000.)
_____)

DOCKET NO. WS-02676A -15-0371

DIRECT
TESTIMONY
OF
JIAN W. LIU
UTILITIES ENGINEER
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

MAY 23, 2016

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Engineering Report for Rio Rico Utilities, Inc. - Wastewater	JWL-2

INTRODUCTION

Q. Please state your name, place of employment and job title.

A. My name is Jian W. Liu. My place of employment is the Arizona Corporation Commission ("ACC" or "Commission"), Utilities Division, 1200 West Washington Street, Phoenix, Arizona 85007. My job title is Water/Wastewater Engineer.

Q. How long have you been employed by the Commission?

A. I have been employed by the Commission since October 2005.

Q. Please list your duties and responsibilities.

A. My main responsibilities are to inspect, investigate and evaluate water and wastewater systems. This includes obtaining data, preparing reconstruction cost new and/or original cost studies, investigative reports, interpreting rules and regulations, and to suggest corrective action and provide technical recommendations on water and wastewater system deficiencies. I also provide written and oral testimony in rate cases and other cases before the Commission.

Q. How many companies have you analyzed for the Utilities Division?

A. I have analyzed more than 50 companies fulfilling these various responsibilities for Utilities Division Staff ("Staff").

Q. Have you previously testified before this Commission?

A. Yes, I have testified before this Commission.

1 **Q. What is your educational background?**

2 A. I am a Ph.D. Candidate in Geotechnical Engineering from Arizona State University ("ASU").
3 I have a Master of Science Degree in Natural Science from ASU and a Master of Science
4 Degree in Civil Engineering from the Institute of Rock & Soil Mechanics ("IRSM"),
5 Academy of Sciences, China.
6

7 **Q. Briefly describe your pertinent work experience.**

8 A. From 1982 to 2000, I was employed by IRSM, SCS Engineers, and URS Corporation as a
9 Civil and Environmental Engineer. In 2000, I joined the Arizona Department of
10 Environmental Quality ("ADEQ"). My responsibilities with ADEQ included review and
11 approval of water distribution systems, sewer distribution systems, and on-site wastewater
12 treatment facilities. I remained with ADEQ until transferring to the Commission in October
13 2005.
14

15 **Q. Please state your professional memberships, registrations, and licenses.**

16 A. I am a licensed professional civil engineer in the State of Arizona.
17

18 **PURPOSE OF TESTIMONY**

19 **Q. What was your assignment in this rate proceeding?**

20 A. My assignment was to provide Staff's engineering evaluation of the subject rate proceeding. I
21 reviewed the Rio Rico Utilities, Inc.'s ("Rio Rico Utilities" or "Company") application and
22 responses to data requests, and I inspected the water and wastewater systems. This testimony
23 and its attachments present Staff's engineering evaluation. The findings of my engineering
24 evaluation are contained in the Engineering Reports that I have prepared for this proceeding.
25 The reports are included as Exhibits JWL-1 and JWL-2 to this pre-filed testimony.

1 **ENGINEERING REPORTS**

2 **Q. Please describe the information contained in your Engineering Reports.**

3 A. The Reports are divided into three general sections: 1) *Executive Summary*; 2) *Engineering Report*
4 *Discussion*, and 3) *Engineering Report Exhibits*. The *Discussion* section for the Water System is
5 further divided into ten subsections: A) Location of Company; B) Description of the Water
6 System; C) Maricopa County Environmental Services Department ("MCESD") Compliance
7 or ADEQ Compliance; D) ACC Compliance; E) Arizona Department Of Water Resources
8 ("ADWR") compliance; F) Water Testing Expenses, G) Water Usage, H) Growth; I)
9 Depreciation Rates; J) Other Issues. The *Discussion* section for the Wastewater System is
10 divided into eight subsections: A) Location of Company; B) Description of the Wastewater
11 System; C) Wastewater Flow; D) Growth; E) ADEQ Compliance; F) ACC Compliance; G)
12 Depreciation Rates; H) Other Issues.

13
14 **RECOMMENDATIONS AND CONCLUSIONS**

15 **Q. What are Staff's conclusions and recommendations regarding the Company's**
16 **operations?**

17 A. Staff's conclusions and recommendations from the engineering report are contained in the
18 "Executive Summary" of Exhibits JWL-1 and JWL-2.

19
20 **Q. Does this conclude your Direct Testimony?**

21 A. Yes, it does.

EXHIBIT JW-1

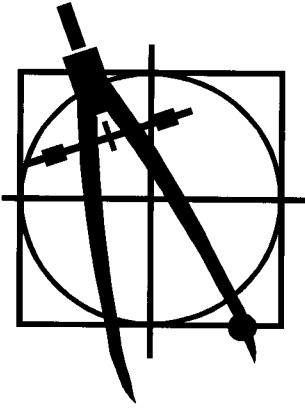
ENGINEERING REPORT FOR

RIO RICO UTILITIES, INC. - WATER

DOCKET NO. WS-02676A-15-0368 (RATES)

JIAN W LIU

March 23, 2016



Engineering Report for:
Rio Rico Utilities, Inc.
Docket No. WS-02676A-15-0368 (Rates)

By: Jian W Liu
Utilities Engineer

March 23, 2016

EXECUTIVE SUMMARY

CONCLUSIONS:

1. The Arizona Department of Environmental Quality ("ADEQ") reported that the Rio Rico Utilities, Inc. ("Rio Rico Utilities" or "Company") Public Water System ("PWS") No. 12-011, is currently delivering water that meets water quality standards required by 40 C.F.R. 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. (ADEQ compliance status report dated March 10, 2016).
2. Rio Rico Utilities is located within the Santa Cruz Active Management Area ("AMA") and is subject to Arizona Department of Water Resources ("ADWR") AMA reporting and conservation requirements. ADWR reported that the Company is currently in compliance with departmental requirements governing water providers and/or community water systems. (ADWR email dated March 1, 2016).
3. Staff concludes that the Company has adequate production capacity and storage capacity to serve the existing customer base and reasonable growth.
4. A check with the Arizona Corporation Commission's ("ACC" or "Commission") Utilities Division Compliance Section showed that there is one item "pending" for the Company. (See Section D for details).
5. Rio Rico Utilities has approved Curtailment Plan and Backflow Prevention Tariffs on file with the Commission.
6. Rio Rico Utilities has ten approved Best Management Practice tariffs on file with the Commission.
7. The Company reported 810,653,000 gallons pumped, 717,527,631 gallons sold, and 31,231,000 gallons used for flushing lines, etc. resulting in a water loss of 7.64 percent for the test year ending December 31, 2014.

RECOMMENDATIONS

1. Staff recommends the average annual cost of \$39,413 be adopted for the water testing expense in this proceeding.
2. In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These rates are presented in Table B and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.
3. The Company has not requested any changes in the "At Cost" service line and meter installation charges that were approved in its last rate application. Therefore, Staff recommends continued use of the current at cost meter and service line installation charges for all meter sizes as listed in Table L-1.

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A. INTRODUCTION AND LOCATION OF COMPANY

Rio Rico Utilities, Inc. ("Rio Rico Utilities" or "Company") is an Arizona public service corporation authorized to provide water and wastewater service within portions of Santa Cruz County, Arizona. On October 28, 2015, the Company filed an application with the Arizona Corporation Commission ("Commission" or "ACC") to increase its rates for water service. The Company's existing Certificate of Convenience and Necessity ("CC&N") for water service covers an area totaling approximately 89 square miles. Rio Rico Utilities provided water service to approximately 6,400 customers as of the test year ending December 31, 2014. Figure 1 shows the location of Rio Rico Utilities within Santa Cruz County and Figure 2 shows the certificated area. The Commission Utilities Division ("Staff") engineering review and analysis of the pending application is presented in this report.

B. DESCRIPTION OF THE WATER SYSTEM

The plant facilities were visited on February 25, 2016, by Jian Liu, Staff Utilities Engineer - Water/Wastewater, in the accompaniment of Gerry Becker, and Dara Duffy of the Company.

The drinking water system serving the community of Rio Rico is divided geographically by the Santa Cruz River, which runs south to north. Twelve inch and sixteen inch transmission mains cross the Santa Cruz River and allow the east and west sections of the water system to operate as a single unit. The terrain is very hilly and consequently the water system is divided into seven pressure zones at 150 feet intervals and dotted with about 26 small pressure tank and booster stations, which are in addition to the major pumping and storage facilities. Six groundwater wells provide the water source and feed into a lower pressure zone. All groundwater is disinfected with elemental chlorine.

(Tabular Description of Water System)

Well Data (active wells only)

ADWR ID No.	Pump HP	Pump GPM	Casing Depth(ft)	Casing Size(in)	Meter Size(in)	Year Drilled
55- 502579	200	1100	650	16	8	1983
55- 619359	75	625	250	10	6	1985
55- 604364	75	625	251	10	6	1968
55- 604363	75	650	603	12	8	1970
55- 587292	200	975	605	16	10	2003
55- 206176	250	1300	650	16	10	2005
Total		5275				

Note: GPM = gallons per minute.

Storage Tanks		Pressure Tanks		Booster Pumps	
Capacity (gallons)	Quantity	Capacity (gallons)	Quantity	Capacity (HP)	Quantity
640,000	1	5,000	16	40	2
200,000	1	2,000	9	30	8
150,000	1	1,500	3	25	13
100,000	1			20	8
10,000	4			15	10
1,000,000	1			10	3
				7.5	9
Total 2,130,000				3	2

Mains		Customer Meters		Fire Hydrants
Size (inches)	Length (feet)	Size (inches)	Quantity	Quantity
4 and Under	325,458	5/8x3/4	6566	315
Over 4	1,478,264	3/4	10	
		1	1	
		1.5	17	
		2	44	
		3	24	
		4	4	
		6	1	

C. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY COMPLIANCE ("ADEQ")

ADEQ reported that the Company's drinking water system, Public Water System ("PWS") No. 12-011, is currently delivering water that meets water quality standards required by 40 C.F.R. 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code ("A.A.C."), Title 18, Chapter 4 (ADEQ compliance status report dated March 10, 2016).

D. ARIZONA CORPORATION COMMISSION COMPLIANCE

A check with the Utilities Division Compliance Section showed that there is one item "pending" for the Company.

DOCKET: WS-02676A-11-0134 DECISION NO: 72732

ACTION: File with Docket Control, as a compliance item in this docket, within two years of the effective date of this Decision, copies of Windward's Certificates of APPROVAL TO

CONSTRUCT (ATC) from the Arizona Department of Environmental Quality for the plant necessary to serve the Windward Development.

COMPLIANCE DUE DATE: January 6, 2016

NOTE: Company filed a request for an Extension of Time on February 4, 2016. It is waiting for Staff's response to the Extension of Time request. Therefore, Company is not considered delinquent, due to the "pending" company request. (ACC Compliance Section Email dated March 15, 2016).

E. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE

Rio Rico Utilities is located within the ADWR Santa Cruz Active Management Area ("AMA") and is subject to ADWR AMA reporting and conservation requirements. ADWR reported that Company is currently in compliance with departmental requirements governing water providers and/or community water systems. (ADWR email dated March 1, 2016).

F. WATER TESTING EXPENSES

Since Rio Rico Utilities serves more than 6,400 customers, the Company does not participate in ADEQ's Monitoring Assistance Program. The Company reported a total water testing expense of \$41,806.60 during the test year. The compliance cycle consists of three, three year periods for a total nine year cycle, therefore, the sampling costs are directly tied into the sampling compliance cycle.

Rio Rico Utilities reported annual water testing expenses for year 2012 to 2014 as follows:

Table A. Water Testing Cost

Year 2012	\$26,421.05
Year 2013	\$50,011.00
Year 2014	\$41,806.60

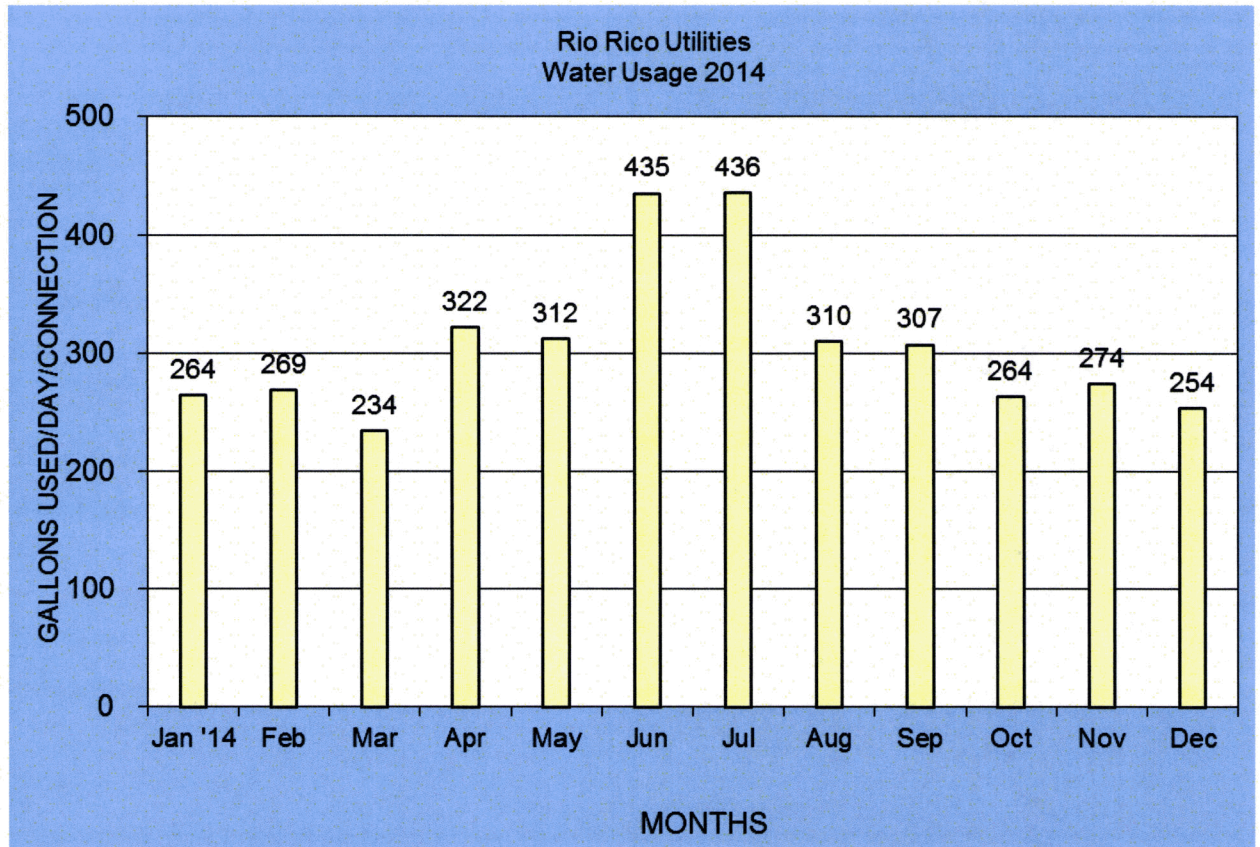
Therefore, average annual water testing expense from 2012 to 2014 is \$39,412.88. Staff reviewed these expenses and supporting documentation provided by the Company. Staff recommends the annual water testing expense of \$39,413 (rounded) be used for purposes of this application.

G. WATER USE

Water Sold

Based on the information provided by the Company, water use for the test year ending December 31, 2014 is presented below. The high monthly domestic water use was 436 gal/day per

service connection in July and the low monthly domestic water use was 234 gal/day per service connection in March. The average annual use was 307 gal/day per service connection.



Non-account Water

Non-account water should be 10 percent or less and never more than 15 percent. It is important to be able to reconcile the difference between water sold and the water produced by the source. A water balance will allow a water company to identify water and revenue losses due to leakage, theft, and flushing. The Company reported 810,653,000 gallons pumped, 717,527,631 gallons sold, and 31,231,000 gallons used for flushing lines, etc. resulting in a water loss of 7.64 percent for the test year ending December 31, 2014.

H. GROWTH

Rio Rico Utilities had 6,770 customers in 2009. In test year 2014, the Company had 6,419 customers. The Company has been losing customers and expects this trend to continue and therefore predicts that little or no growth will occur in the next five years.

Staff concludes that Rio Rico Utilities has adequate production capacity and storage capacity to serve the existing customer base and reasonable growth.

In its application Rio Rico Utilities has requested approval of Fair Value Arizona Rate Evaluation Model ("FARE"). Please see testimony of Staff member James R. Armstrong for the details.

I. DEPRECIATION RATES

In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These rates are presented in Table B and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

Table B. Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.5
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.0
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00

344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
348	Other Tangible Plant	----	----

NOTES:

1. These depreciation rates represent average expected rates. Water companies may experience different rates due to variations in construction, environment, or the physical and chemical characteristics of the water.
2. Acct. 348, Other Tangible Plant may vary from 5% to 50%. The depreciation rate would be set in accordance with the specific capital items in this account.

J. CURTAILMENT PLAN AND BACKFLOW PREVENTION TARIFF

Rio Rico Utilities has approved Curtailment Plan and Backflow Prevention Tariffs on file with the Commission.

K. BEST MANAGEMENT PRACTICES

Rio Rico Utilities has ten approved Best Management Practice tariffs on file with the Commission.

L. METER AND SERVICE LINE INSTALLATION CHARGES

The Company has not requested any changes in the "At Cost" service line and meter installation charges that were approved in its last rate application. Therefore, Staff recommends continued use of the current at cost meter and service line installation charges for all meter sizes as listed below in Table L-1.

Table L-1. Service Line and Meter Installation Charges

Meter Size	Current and Proposed Service Line Charges	Current and Proposed ⁽¹⁾ Meter Charges	Current and Proposed Total Charges
5/8 x 3/4-inch	At Cost	At Cost	At Cost
3/4-inch	At Cost	At Cost	At Cost
1-inch	At Cost	At Cost	At Cost
1-1/2-inch	At Cost	At Cost	At Cost
2-inch	At Cost	At Cost	At Cost
3-inch	At Cost	At Cost	At Cost
4-inch	At Cost	At Cost	At Cost
6-inch	At Cost	At Cost	At Cost
8-inch & Larger	At Cost	At Cost	At Cost

(1). Meter charge includes meter box or vault.

M. POST-TEST YEAR PLANT

In its application, Rio Rico Utilities requested post-test year ("PTY") plant adjustments. The post-test year project additions are as follows:

Job Description	Placed In Service Dates
1) 2000 AMR Meters With Two Hand Held Readers, Mobile Computer & Programming	March 15, 2015
2) Security Panic Buttons	March 2, 2015
3) WP 30 Booster Station – Phase 1 Engineering & Construction	June 4, 2015
4) Booster Station Replacements	Various
5) Well Replacements	Various
6) Security Fencing for Back Property	Various
7) Booster Station Replacements	Various
8) Distribution Mains – Replacements	Various
9) Replacement Services	Various
10) Replacement Meters – Residential	Various
11) Replacement Hydrants	Various
12) Tools & Equipment Replacements	Various
13) Tools & Equipment New	Various
14) Safety Equipment Replacements	Various
15) Hot Tap Drilling Machine	Various

Staff has inspected and verified completion of the post-test year plant additions listed above. These post-test year plant additions were in-service during Staff's inspection on February 25, 2016.

Staff witness Teresa Hunsaker will address any PTY plant cost adjustments in her testimony.

SANTA CRUZ COUNTY

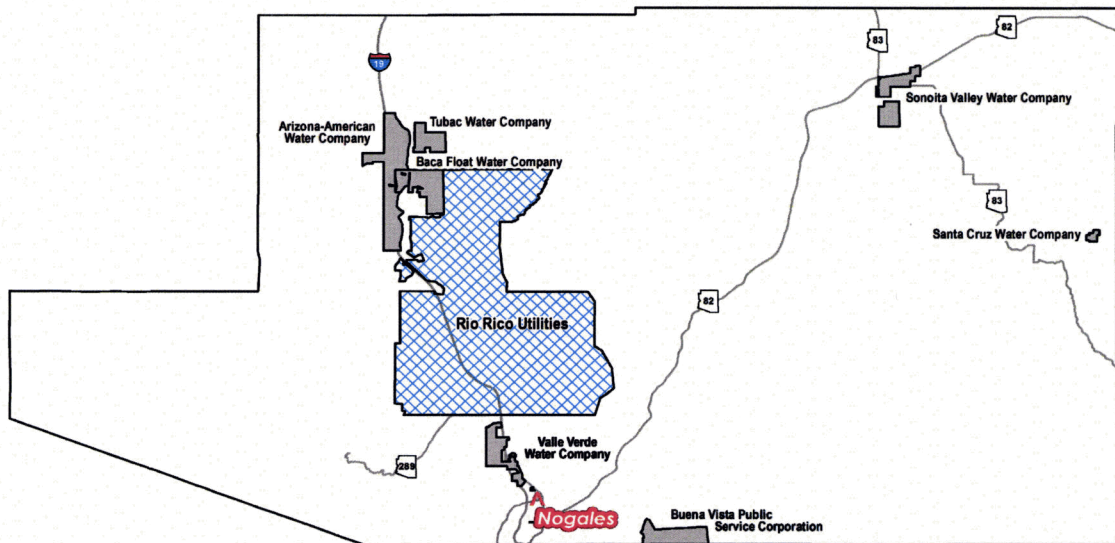


FIGURE 1: COUNTY MAP

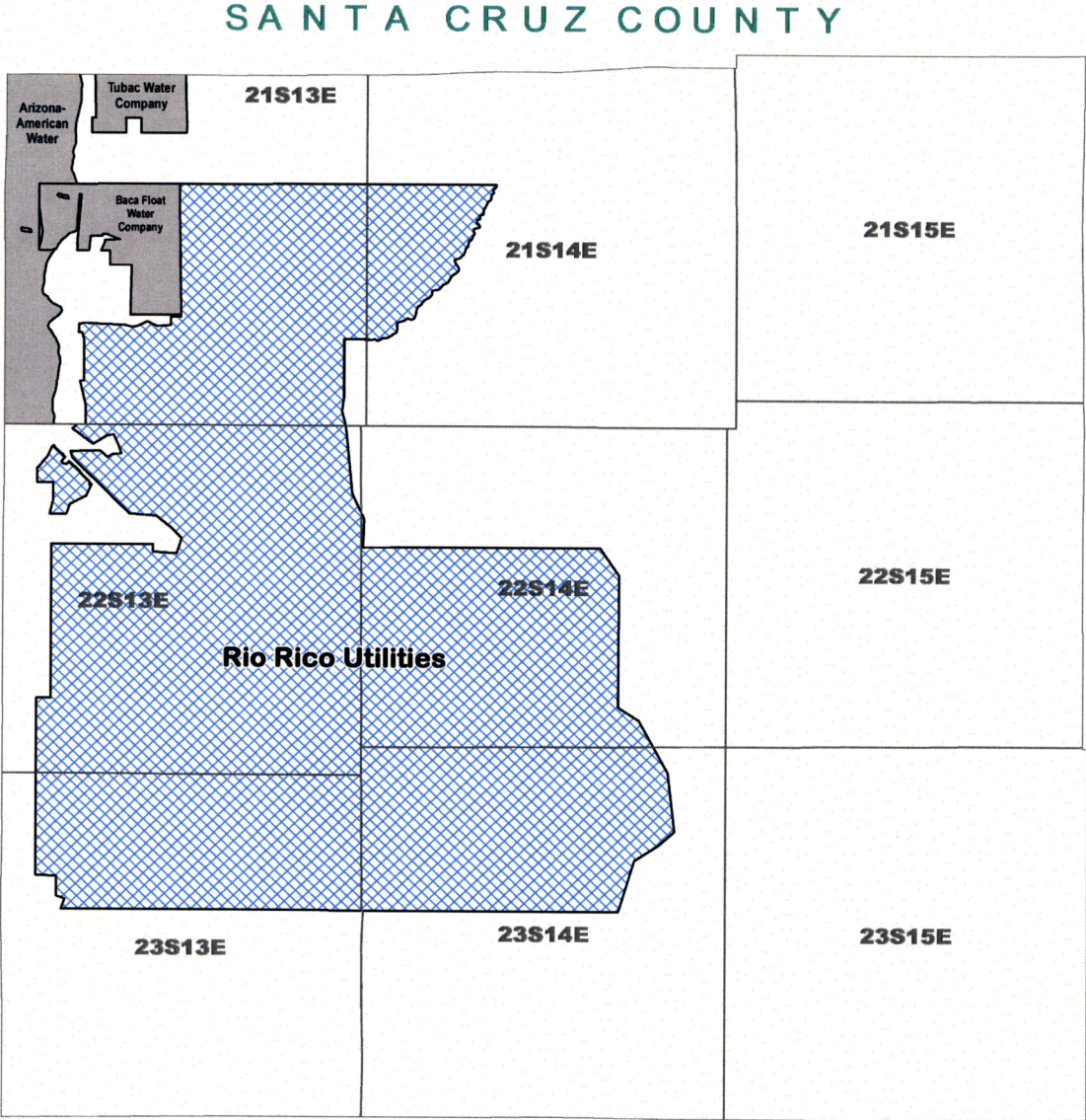


FIGURE 2: CERTIFICATED AREA

EXHIBIT JW-2

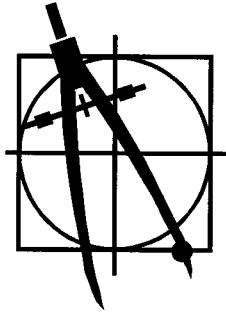
ENGINEERING REPORT FOR

RIO RICO UTILITIES, INC. - WASTEWATER

DOCKET NO. WS-02676A-15-0368 (RATES)

JIAN W LIU

March 23, 2016



**Engineering Report
Rio Rico Utilities, Inc. - Wastewater
Docket No. WS-02676A-15-0368 et al.
(Rates)**

By Jian W Liu

March 23, 2016

EXECUTIVE SUMMARY

CONCLUSIONS:

1. The Arizona Department of Environmental Quality ("ADEQ") regulates the Rio Rico Utilities, Inc. ("Rio Rico Utilities" or "Company") wastewater treatment plants under Permits Nos. 101731 and 52015. "Based upon the data submitted by the facility, ADEQ has determined that as of this date the facility was currently in compliance for the review period noted above." (ADEQ report dated March 11, 2016)
2. A check with the Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Compliance Section showed that there are no delinquent compliance items at this time. (ACC Compliance Section Email dated March 15, 2016)
3. Staff concludes that Rio Rico Utilities has adequate wastewater treatment capacity to serve the existing customer base and reasonable growth.

RECOMMENDATIONS:

1. In the prior rate case, the Company adopted Staff's typical and customary depreciation rates. These rates are presented in Table G-1 and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.
2. The Company has not requested any changes in the "At Cost" service line installation charges that were approved in its last rate application. Therefore, Staff recommends continued use of the current at cost service line installation charges for all service line sizes as listed in Table H-1.
3. Staff recommends that Rio Rico Utilities be required to provide separate wastewater descriptions and wastewater flow data for its primary wastewater system (wastewater flows to the Nogales International wastewater treatment facility) and its small wastewater system (wastewater flows to an aerobic stabilization pond) in future Commission Annual Reports, beginning with the 2016 Annual Report filed in 2017.

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A. INTRODUCTION AND LOCATION OF COMPANY

Rio Rico Utilities, Inc. ("Rio Rico Utilities" or "Company") is an Arizona public service corporation authorized to provide water and wastewater service within portions of Santa Cruz County, Arizona. On October 28, 2015, the Company filed an application with the Arizona Corporation Commission ("Commission" or "ACC") to increase its rates for wastewater service. The Company's existing CC&N for wastewater service covers an area totaling approximately 97 square miles. Rio Rico Utilities provided wastewater service to approximately 2,050 customers as of the test year ending December 31, 2014. Figure 1 shows the location of Rio Rico Utilities within Santa Cruz County and Figure 2 shows the certificated area. The Commission's Utilities Division Staff ("Staff") engineering review and analysis of the pending application is presented in this report.

B. DESCRIPTION OF THE WASTEWATER SYSTEM

The plant facilities were visited on February 25, 2016, by Jian Liu, Staff Utilities Engineer - Water/Wastewater, in the accompaniment of Gerry Becker, and Dara Duffy of the Company.

There are two separate wastewater systems. The primary wastewater system consists of collection mains and 5 large pumping stations. The wastewater from the last pumping station enters the City of Nogales sewerage collection system where it co-mingles and eventually reaches the Nogales International wastewater treatment facility. The Nogales International treatment plant is owned and operated by the United States International Boundary and Water Commission. The City of Nogales pays fixed and commodity charges for the use of the international facility. Rio Rico then sub-contracts with the City of Nogales for capacity in the international facility and pays sewer use fees directly to the City of Nogales.

There is also a small wastewater system which serves the "Villas Unit 12" subdivision. It consists of a single pumping station and an aerobic stabilization pond. This facility served approximately 124 customers as of the test year ending December 31, 2014.

Tabular Description of both wastewater systems

Lift Station

Location	Quantity of Pumps	Horsepower per Pump	Capacity per Pump (GPM)	Wet Well Capacity (gals.)
Lift Station # 1	2	88	725	32,313
Lift Station # 2	2	47	500	9,000
Lift Station # 3	2	47	500	9,000
Lift Station # 4	2	15	175	8,000
Lift Station # 5	2	3	27	1,608

Manholes

Type	Quantity
Standard	535
Drop	15

Force Mains

Size	Material	Length (Feet)
4-inch	PVC	3,714
4-inch	DI	120
6-inch	PVC	19,946
6-inch	DI	693

Cleanouts

Quantity
132

Collection Mains

Diameter	Length (Feet)
4-inch	2,845
6-inch	11,273
8-inch	216,971
10-inch	12,340
12-inch	14,554
14-inch	3,060
16-inch	494
18-inch	170

Service Laterals

Diameter	Material	Length (Feet)
4-inch	Various	2,057
6-inch	Various	147
8-inch	PVC	10

Staff recommends that Rio Rico Utilities be required to provide separate wastewater descriptions and wastewater flow data for its primary wastewater system (wastewater flows to the Nogales International wastewater treatment facility) and its small wastewater system (wastewater flows to an aerobic stabilization pond) in future Commission Annual Reports, beginning with the 2016 Annual Report filed in 2017.

C. WASTEWATER FLOW

Based on the information provided by the Company, wastewater flow for the year 2014 is presented in Figure 3. Customers experienced a high monthly average wastewater flow of 320 gallons per day ("GPD") per connection and a low monthly average wastewater flow of 165 GPD per connection for an average annual wastewater flow of 199 GPD per connection.

D. GROWTH

Rio Rico Utilities had 2,317 customers in 2009. In test year 2014, the Company had 2,190 customers. The Company has been losing customers and expects this trend to continue and therefore predicts that little or no growth will occur in the next five years.

Staff concludes that Rio Rico Utilities has adequate wastewater treatment capacity to serve the existing customer base and reasonable growth.

In its application Rio Rico Utilities has requested approval of Fair Value Arizona Rate Evaluation Model ("FARE"). Please see testimony of Staff member James R. Armstrong for the details.

E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE

ADEQ regulates the Rio Rico Utilities wastewater treatment plants under Permits Nos. 101731 and 52015. "Based upon the data submitted by the facility, ADEQ has determined that as of this date the facility was currently in compliance for the review period noted above." (ADEQ report dated March 11, 2016).

F. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE

A check with the Utilities Division Compliance Section showed that there are no delinquent compliance items at this time. (ACC Compliance Section Email dated March 15, 2016).

G. DEPRECIATION RATES

In the prior rate case, the Company adopted Staff’s typical and customary depreciation rates. These rates are presented in Table G-1 and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

Table G-1. Wastewater Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
354	Structures & Improvements	30	3.33
355	Power Generation Equipment	20	5.00
360	Collection Sewers – Force	50	2.0
361	Collection Sewers- Gravity	50	2.0
362	Special Collecting Structures	50	2.0
363	Services to Customers	50	2.0
364	Flow Measuring Devices	10	10.0
365	Flow Measuring Installations	10	10.00
366	Reuse Services	50	2.00
367	Reuse Meters & Meter Installations	12	8.33
370	Receiving Wells	30	3.33
371	Pumping Equipment	8	12.50
374	Reuse Distribution Reservoirs	40	2.50
375	Reuse Transmission & Distribution System	40	2.50
380	Treatment & Disposal Equipment	20	5.0
381	Plant Sewers	20	5.0
382	Outfall Sewer Lines	30	3.33
389	Other Plant & Miscellaneous Equipment	15	6.67
390	Office Furniture & Equipment	15	6.67
390.1	Computers & Software	5	20.0
391	Transportation Equipment	5	20.0
392	Stores Equipment	25	4.0
393	Tools, Shop & Garage Equipment	20	5.0
394	Laboratory Equipment	10	10.0
395	Power Operated Equipment	20	5.0
396	Communication Equipment	10	10.0
397	Miscellaneous Equipment	10	10.0
398	Other Tangible Plant	----	----

NOTE: Acct. 398, Other Tangible Plant may vary from 5% to 50%. The depreciation rate would be set in accordance with the specific capital items in this account.

H. SERVICE LINE INSTALLATION CHARGES

The Company has not requested any changes in the “At Cost” service line installation charges that were approved in its last rate application. Therefore, Staff recommends continued use of the current at cost service line installation charges for all service line sizes as listed in Table H-1.

Table H-1. Service Line Installation Charges

Service Line Size	Current and Proposed Charges
4-inch	At Cost
6 inch	At Cost
8-inch	At Cost
10-inch	At Cost
12-inch	At Cost

I. POST-TEST YEAR PLANT

In its application, Rio Rico Utilities requested post-test year (“PTY”) plant adjustments. The post-test year project additions are as follows:

Job Description	Placed In Service Dates
1) Utility Tractor with Trailer	March 23, 2015
2) Lift Station Replacement	Various
3) Manholes Replacement	Various
4) Collection Mains Replacement	Various
5) Sewer Service Replacements	Various
6) Inspection Camera	Various

Staff has inspected and verified completion of the post-test year plant additions above. These post-test year plant additions were in-service during Staff’s inspection on February 25, 2016.

Staff witness Teresa Hunsaker will address any PTY plant cost adjustments in her testimony.

SANTA CRUZ COUNTY

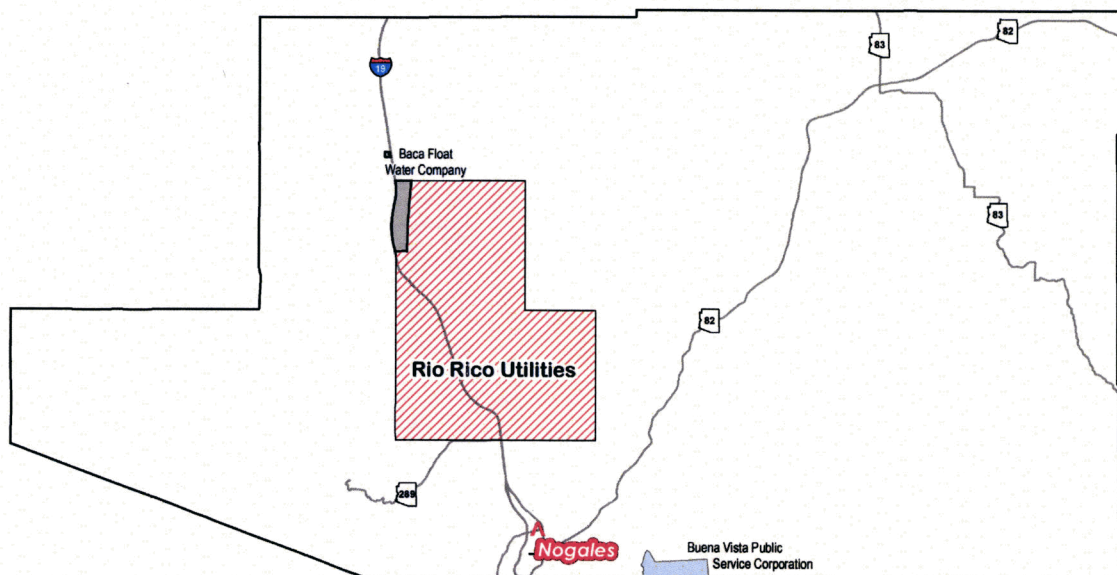


FIGURE 1 COUNTY MAP

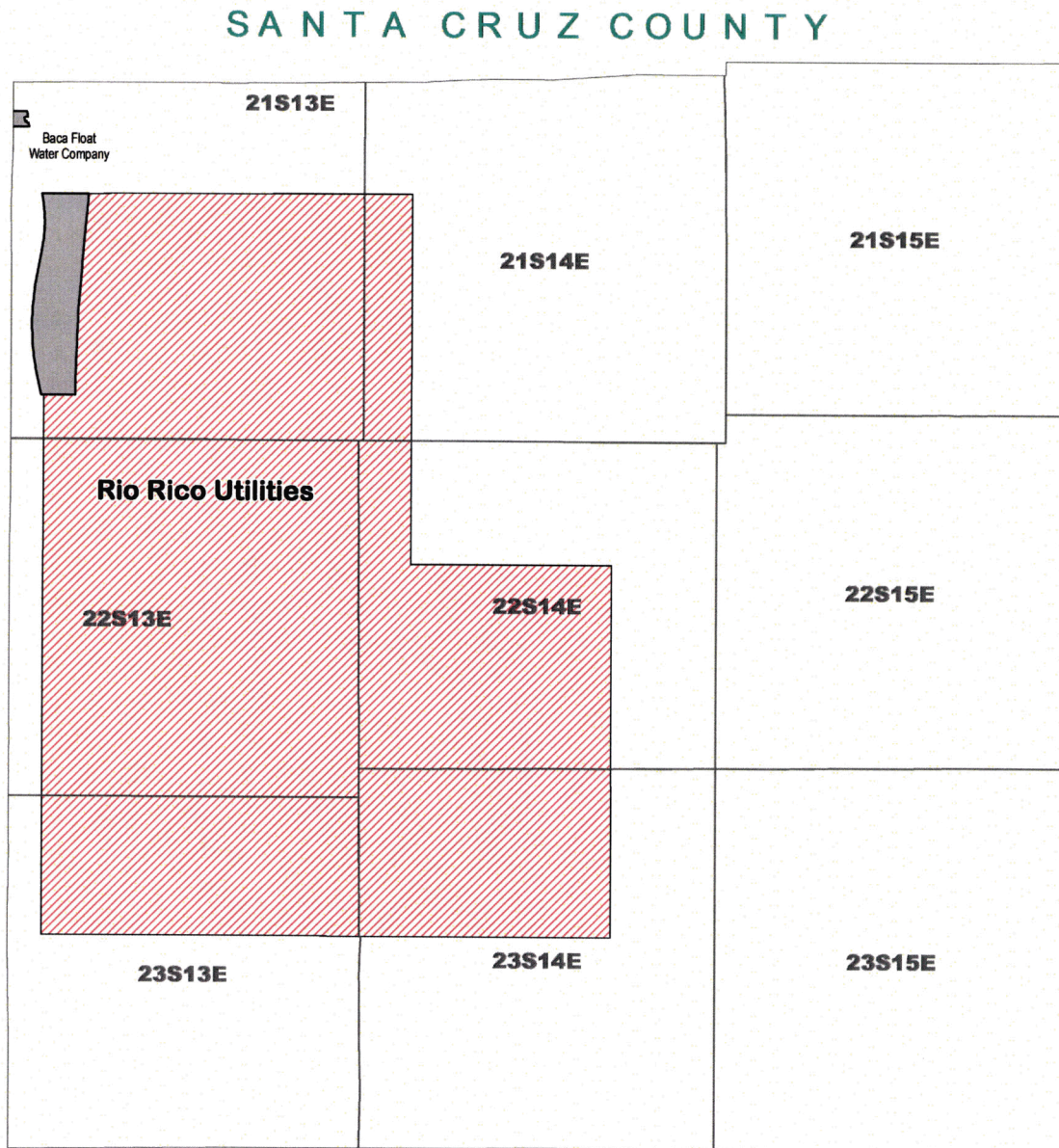


FIGURE 2 CERTIFICATED AREA

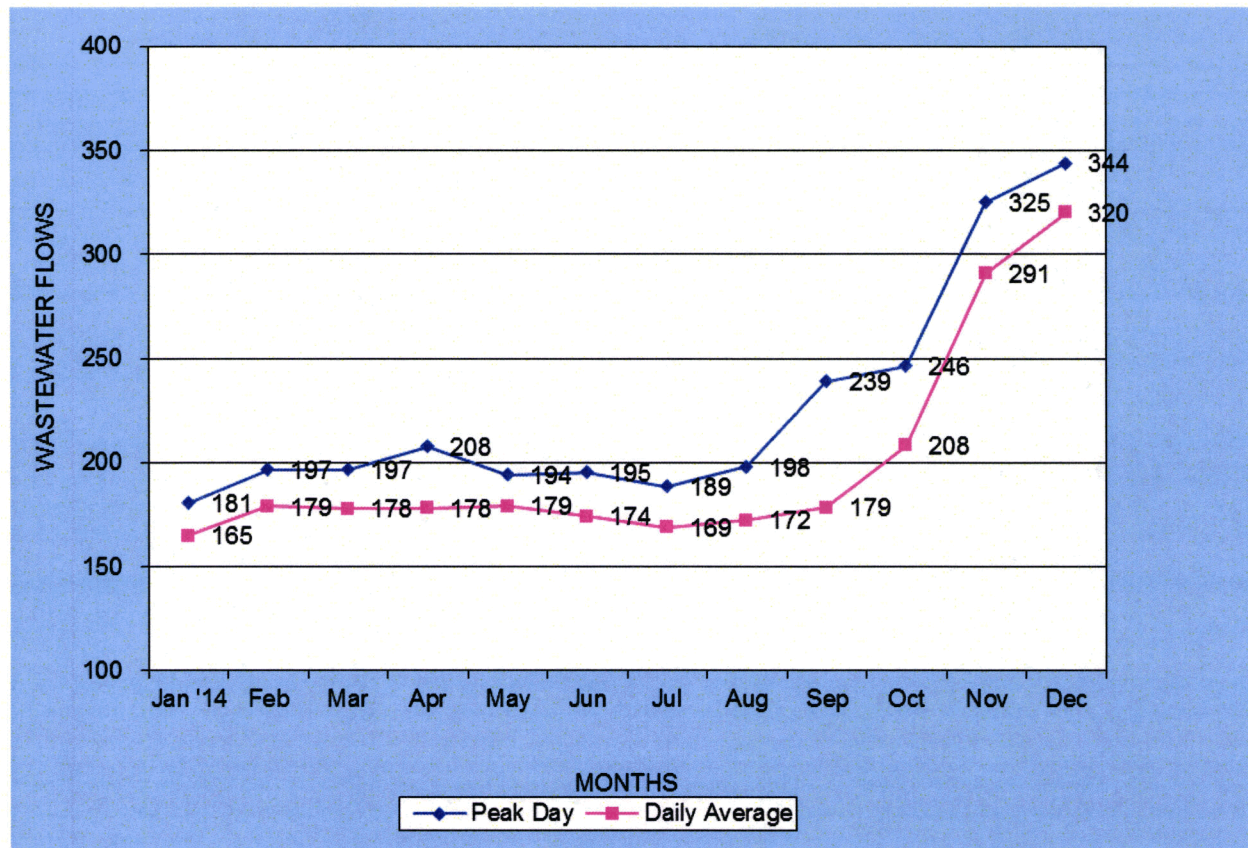


FIGURE 3 WASTEWATER FLOW